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by
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ABSTRACT AND MANAGEMENT SUMMARY

Prewitt and Associates, Inc., was contracted by PTP Transportation, LLC, to perform archeological investigations for Titus County in the proposed final alignment of FM 1000. The work, performed under Texas Antiquities Permit No. 5998, consisted of archeological test excavations at sites 41TT896 and 41TT906 to assess their eligibility for listing in the National Register of Historic Places and designation as State Archeological Landmarks and archeological survey of three parcels. Fieldwork was done in July–August 2011, January–February 2012, and July 2012 and required about 99 person-days of effort.

Test excavations at 41TT896 consisted of 23 backhoe trenches, eight 1x1-m test units, and 13 shovel tests. This effort revealed low-density scatters of prehistoric chipped stone artifacts and twentieth-century historic artifacts, along with a single historic feature. No prehistoric cultural features were identified. Recovered projectile points and the absence of prehistoric ceramics suggest that the prehistoric component dates to the Late Archaic period. The historic component relates to a farm complex outside the project area. Neither component at 41TT896 has the capacity to contribute important information, and thus the site is ineligible for National Register listing or State Archeological Landmark designation. Test excavations at 41TT906 consisted of 15 backhoe trenches and four 1x1-m test units; the final task consisted of mechanically scraping 1,864 m^2 of the site to ensure that no Native American burials were present. These efforts revealed a low-density scatter of prehistoric chipped stone artifacts and ceramics and a single disturbed burned rock feature representing sparse Late Caddo, Archaic, and perhaps late Paleoindian components. The investigated part of 41TT906 has no capacity to contribute important information and thus is ineligible for National Register listing or State Archeological Landmark designation.

Investigation of Survey Areas 1–3 included the excavation of 50 shovel tests across 13 acres. No archeological sites were identified in Survey Areas 1 or 2. A historic-age residential structure in Survey Area 2 was moved onto the property in the 1960s–1970s; it does not possess integrity of place or materials and is not eligible for listing in the National Register. Historic site 41TT918 was identified in Survey Area 3. It consists of a historic scatter that represents outbuildings associated with a twentieth-century farmstead located outside the project area to the southeast. It has no capacity to contribute important information and thus is ineligible for National Register listing or State Archeological Landmark designation.

All artifacts and records generated by this project are curated at the Texas Archeological Research Laboratory at the University of Texas at Austin.

ACKNOWLEDGMENTS

The authors would like to thank the owners or executors of the various properties in the project area for granting right of entry to conduct archeological investigations and, in some instances, granting permission for artifact collection. Thomas J. Walden Jr., Mike Mahar, and others of Property Acquisition Services, Inc., established contacts with the owners and executors, obtained right of entry, and relayed questions about the history of certain parcels between the archeologist and pertinent family members. This project could not have been completed without the assistance of Terry Plucker of PTP Transportation, LLC, who maintained communication with the necessary parties concerning right of entry, means of physical access, and artifact collection policies. Terry also assisted with marking the limits of the project area at Survey Area 1 and 41TT906, installing barbed-wire fencing at the latter, and various other aspects of fieldwork. John E. Dockall performed much of the logistical work during the initial planning and preparatory phases of this project. Dennis Cameron of Cameron Auto Salvage provided mechanical equipment and equipment operators. Steven "Goose" Brooks capably operated a backhoe during trenching and backfilling and assisted with fence installation at 41TT896 and 41TT906. Jose Gomez's expertise with a trackhoe proved invaluable during mechanical scraping and backfilling at 41TT906. Backfilling the scraped areas at 41TT906 was expedited by Harold Penny's efficient bulldozer work. At Prewitt and Associates, Ross C. Fields served as principal investigator, and Damon A. Burden was the project archeologist. John Dockall, Jennifer McWilliams, Aaron Norment, Tim Griffith, Virginia Hatfield, and Rob Thrift served as field archeologists and assisted with various aspects of this project in and out of the field. Sandy Hannum created field maps, and she and Brian Wootan produced the figures used in this report. Stephanie Katauskas and Amy Dase conducted the historic archival research. Ross Fields edited the report, and Jennifer McWilliams photographed the artifacts.

INTRODUCTION

This report presents the results of test excavations at archeological sites 41TT896 and 41TT906 and archeological survey of three parcels in Titus County, Texas (Figure 1). This work was performed by Prewitt and Associates, Inc., for PTP Transportation, LLC (on behalf of Titus County), under Texas Antiquities Permit No. 5998. This project was conducted in response to the planned realignment of the FM 1000 corridor, which will connect the proposed U.S. Highway 271 Relief Route on the west with existing FM 1735 on the east. FM 1000 is a two-lane roadway project that will include construction on new location, widening an existing roadway, and construction of two new bridges: one over the Union Pacific Railroad tracks west of existing U.S. Highway 271 and the other over the Hart Creek floodplain (O'Kelly et al. 2009). The total length of the FM 1000 project is approximately 7.97 km, and the width of the proposed alignment ranges from 40 to 79 m; the total Area of Potential Effects is 136 acres. All work done was in proposed new right of way.

Sites 41TT896 and 41TT906 had been identified during a previous survey for the project (O'Kelly et al. 2009), but they needed additional investigation to determine if they are eligible for listing in the National Register of Historic Places (36 CFR 60; 36 CFR 800) or designation as State Archeological Landmarks (13 TAC 26). The three parcels surveyed (Survey Areas 1–3) were investigated because parts or all of them were not included in the previous survey. Due to right-of-entry complications, test excavations and survey were conducted in two episodes—in July–August 2011 and January–February 2012—and required about 75 person-days of effort. Upon review of an initial draft report on the work, the Texas Department of Transportation's Environmental Affairs Division requested that mechanical scraping be done at 41TT906 to determine whether Native American burials were present. This was conducted in July 2012 and required about 24 person-days of effort.

Testing involved backhoe trenching and manual excavation of test units and shovel tests, and mechanical stripping was performed with a trackhoe. Survey involved pedestrian transects and shovel testing. The testing found that neither 41TT896 nor 41TT906 is eligible for National Register listing or State Archeological Landmark designation. The survey identified one new historic archeological site (41TT918) and a historic-age building; neither is eligible for the National Register, and 41TT918 does not warrant designation as a State Archeological Landmark.

The remainder of this report consists of the following sections: Environmental Setting; Previous Investigations; Testing at 41TT896; Testing and Mechanical Scraping at 41TT906; Survey Area 1; Survey Area 2; Survey Area 3; Summary and Conclusions; and References Cited.

ENVIRONMENTAL SETTING

The project area is within the Western Gulf Coastal Plain, and regional geology is associated with ancestral marine and deltaic deposits of the Gulf of Mexico (Fenneman 1938; Sellards et al. 1932). Rocks derived from these deposits crop out to form a series of southeastward-dipping cuestas or escarpments. These basement rocks are overlain by clays and sands associated with the lower Eocene Wilcox Formation. These sediments were deposited as channel and overbank sediments of the Mount Pleasant fluvial system (Fisher 1965:105). The latter is a source of usable lithic material in gravel form in the project vicinity. Other sources of usable gravels include Pleistocene fluvial terrace deposits and Holocene alluvial deposits along major and some minor drainages in the area. Chert, quartzite, and silicified wood commonly occur in these depositional environments.

Regional topography consists of gently rolling to hilly uplands dissected by numerous small and medium-sized tributaries of Big Cypress Creek. Site 41TT896 and Survey Areas 2 and 3 are in upland settings east of Hart Creek. Site 41TT906 and Survey Area 1 are located adjacent to and on the Hart Creek floodplain. Except for the Quaternary alluvial deposits mapped along Hart Creek in Survey Area 1, the subsurface geologic units mapped in the various project segments consist of the Eocene-age Wilcox Group (undivided), Carrizo Sand, and Queen City Formations. These deposits include sands, silty and sandy clays, and clays with siltstone and ironstone concretions (Bureau of Economic Geology 1979).

Soil maps depict 41TT896 and most of Survey Area 3 on Bowie fine sandy loam soils with

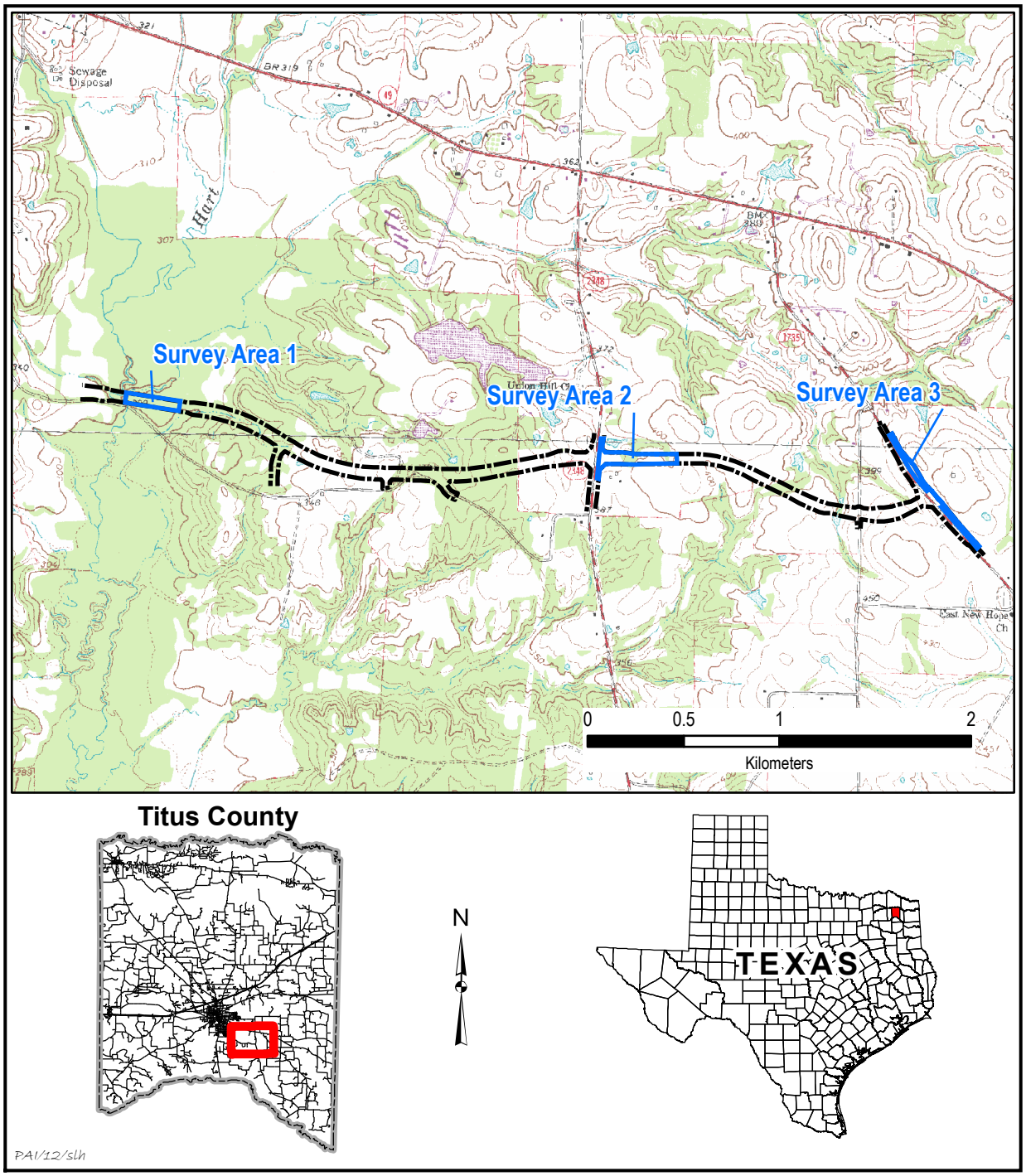

Figure 1. USGS topographic map showing the locations of areas investigated within the proposed FM 1000 corridor. Site locations are not shown in report copies for public distribution.

2–5 percent slopes (Roberts 1990; U.S. Department of Agriculture, Natural Resources Conservation Service 2012a). Kirvin gravelly fine sandy loam with 3–8 percent slopes is mapped in an elevated area in the northwest part of Survey Area 3 that includes 41TT918. Bowie series soils typically are well drained and found on broad, very gently to moderately sloping interfluves (U.S. Department of Agriculture, Natural Resources Conservation Service 2012b). Kirvin

gravelly fine sandy loam is located on gently to strongly sloping, well-drained oval ridges (Roberts 1990).

Site 41TT906 is mapped on Woodtell fine sandy loam with 5–20 percent slopes and frequently flooded Nahatche loam silty clay loam (Roberts 1990; U.S. Department of Agriculture, Natural Resources Conservation Service 2012a). Survey Area 1 is mapped on the same Nahatche silty clay loam and on frequently flooded Estes clay loam. Woodtell series soils are located in well-drained areas on gently sloping ridge tops or stream divides and strongly to moderately steep upland side slopes (U.S. Department of Agriculture, Natural Resources Conservation Service 2012b). The Nahatche series consists of deep, somewhat poorly drained soils on floodplains (Roberts 1990; U.S. Department of Agriculture, Natural Resources Conservation Service 2012b). The Estes series is characterized by very deep, nearly level, somewhat poorly drained soils on the floodplains of larger streams (Roberts 1990; U.S. Department of Agriculture, Natural Resources Conservation Service 2012b).

Survey Area 2 is in an area mapped as having Freestone fine sandy loam with 1–3 percent slopes and Woodtell fine sandy loam with 2–5 percent slopes (Roberts 1990; U.S. Department of Agriculture, Natural Resources Conservation Service 2012a). Both are found in gently sloping to moderately steep and moderately well-drained areas (Roberts 1990). Freestone soils are on nearly level to gently sloping upland terrace remnants, stream divides, and stream terraces (Roberts 1990; U.S. Department of Agriculture, Natural Resources Conservation Service 2012b).

The area climate is characterized by cool short winters and hot summers due to the presence of moist tropical air from the Gulf of Mexico. Total annual precipitation is about 45 inches, with 53 percent of the annual total (24 inches) falling between April and September (Roberts 1990:2–3). The project area is within the Austroriparian biotic province, which is part of the Forested Coastal Plain or post oak savanna (Blair 1950; Fisher 1965:10). Post oak and blackjack oak typically dominate the overstory within this region. Other trees common along river and stream floodplains include red oak, willow oak, water oak, beech, and sweet gum. Various pines, hickory, cypress, elm, ash, maple, and cottonwood are also common.

Regional fauna provided a diverse array of resources for both prehistoric and historic inhabitants. Blair (1950:98–100) notes the occurrence of at least 47 mammal species in modern and recent times, together with 29 species of snake, 10 species of lizard, 2 land turtles, and 35 species of amphibian. Various species of fish and mussels are abundant in area streams and rivers, and crayfish occur in some localities. Characteristic mammal species include white-tailed deer, opossum, cottontail rabbit, swamp rabbit, several kinds of squirrel, beaver, raccoon, fox, black bear, and armadillo.

PREVIOUS INVESTIGATIONS

Review of the Texas Historical Commission's Archeological Sites Atlas indicates that many known sites are within 1 km of the various parts of the current project area. Personnel with GeoMarine, Inc., recorded a historic site (41TT768) along State Highway 49, about 1.1 km north-northwest of 41TT896 and within 0.9 km of Survey Area 3. Site 41TT898, a historic site recorded during survey of the FM 1000 corridor, is approximately 60 m west of the west end of Survey Area 2.

Fourteen archeological sites are within 1.0 km of 41TT906 and Survey Area 1. Of these, 7 are unknown prehistoric (41TT32, 41TT613, 41TT615, 41TT895, and 41TT907–41TT909), 1 is a historic farmstead (41TT897), 1 is a segment of a historic railroad grade (41TT910), 3 are potential Archaic to Caddo (41TT33, 41TT46, and 41TT610), 1 is Titus phase Caddo (41TT34), and 1 is multicomponent unknown prehistoric and historic (41TT894). Eight of these sites are within 250 m of 41TT906 (41TT32–41TT34, 41TT895, 41TT897, and 41TT907–41TT909) and represent occupations dating from the Archaic to Late Prehistoric Caddo and Historic periods.

Sites 41TT894, 41TT895, 41TT897, and 41TT907–41TT910 were recorded by PBS&J in 2008 (O'Kelly et al. 2009). Sites 41TT610, 41TT613, and 41TT615 were recorded during a survey conducted for the Texas Water Development Board in 1989. Milton Bell recorded 41TT32–41TT34 and 41TT46 in the early 1970s. Site 41TT32, which was partially overlapped by the first and third proposed FM 1000 alignments, was revisited by PBS&J in 2008 (O'Kelly et al. 2009).

TESTING AT 41TT896

Setting

Site 41TT896 was recorded as a multicomponent prehistoric and historic site during the PBS&J survey of the first proposed FM 1000 alignment in 2008 (O'Kelly et al. 2009). The site is in open pasture at the eastern terminus of the proposed highway corridor, primarily west of its intersection with existing FM 1735 (Figure 2). The site is on the southwest flank of a hill that peaks northeast of FM 1735. Surface elevations in the site area vary from about 445 to 435 ft above mean sea level. Area terrain drops gradually to a small, intermittent, southeast-northwest drainage about 30 m southwest of the site (Figure 3).

The site as originally defined was almost entirely southwest of FM 1735, had dimensions of 90 m northwest-southeast by 30–50 m northeast-southwest, and encompassed an approximate area of 2,700 m^2. The site boundary was expanded as a result of the current investigation, with the site likely extending beyond the limits of proposed new right of way southwest and northeast of FM 1735. The modified site boundary is 120 m northwest-southeast by about 50–90 m northeast-southwest and is approximately 7,935 m^2. This includes the main part of the site in new right of way southwest of the FM 1735 corridor, the area within the existing FM 1735 right of way, and the approximately 18-m-wide new right of way northeast of FM 1735 (horizontal Area of Potential Effects = 2 acres). The full extents of the areas within new right of way northeast and southwest of FM 1735, which were privately owned at the time of fieldwork, were investigated. The area within the existing FM 1735 right of way was not investigated because it is extensively disturbed.

Project schematics call for raising the existing FM 1735 road profile 0.6–1.5 m across the site area. The east terminus of the new highway is to be constructed on a 0.9–1.5-m-thick road grade set on the existing ground surface as it transitions downward from FM 1735 to a proposed cut section west-southwest of the intermittent drainage. Thus, the vertical Area of Potential Effects within the site area should be 1 m or less. Construction impacts within the existing FM 1735 right of way are considered insignificant, since any archeological deposits originally located in this area likely have been disturbed by previous road construction, ditch excavation, and subsurface utilities installation.

Previous Work

During the 2008 survey, the eastern terminus of the FM 1000 project corridor was designated a high-probability area for historic resources based on identification of a farmstead in the vicinity of 41TT896 on a 1909 Titus County soils map and an early Titus County highway map (O'Kelly et al. 2009:81; Texas State Highway Department 1940; U.S. Department of Agriculture, Field Operations Bureau of Soils 1909). The survey crew excavated 28 shovel tests to define the site area. Nine tests were positive, yielding a total of 14 artifacts (9 historic and 5 prehistoric). The shovel test assemblage included a biface fragment, 4 pieces of quartzite debitage, 2 pieces of glass (clear and aqua), a whiteware sherd, a nail and 4 nail fragments, and a handmade brick fragment. Prehistoric artifacts were distributed to a depth of 30 cm, while historic artifacts were recovered to 50 cm. A concentration of bricks was noted at the base of a bois d'arc tree approximately 50 m northwest of the site outside the proposed FM 1000 corridor. The maker's marks on the bricks indicated they were produced in nearby Winfield, Texas.

A quartzite Yarbrough dart point was recovered as an isolated surface find northeast of FM 1735, "by a buried gas line at the fence line of a plowed field" (O'Kelly et al. 2009:85). According to the site sketch map, the point was just northeast of the FM 1735 right-of-way fence line (O'Kelly et al. 2009:Figure 24). No shovel tests were excavated in that area, and no other artifacts were identified during surface inspection of the area, leading the investigators to suggest that the point was probably redeposited "from the main part of the site," which was presumably southwest of the artifact's location (O'Kelly et al. 2009:90).

PBS&J reported that the historic artifacts recovered at 41TT896 were possibly representative of a historic trash dump or outbuilding associated with a nearby residence, and that the material was suggestive of a domestic occupation dating from the late nineteenth through early twentieth centuries. The brick scatter

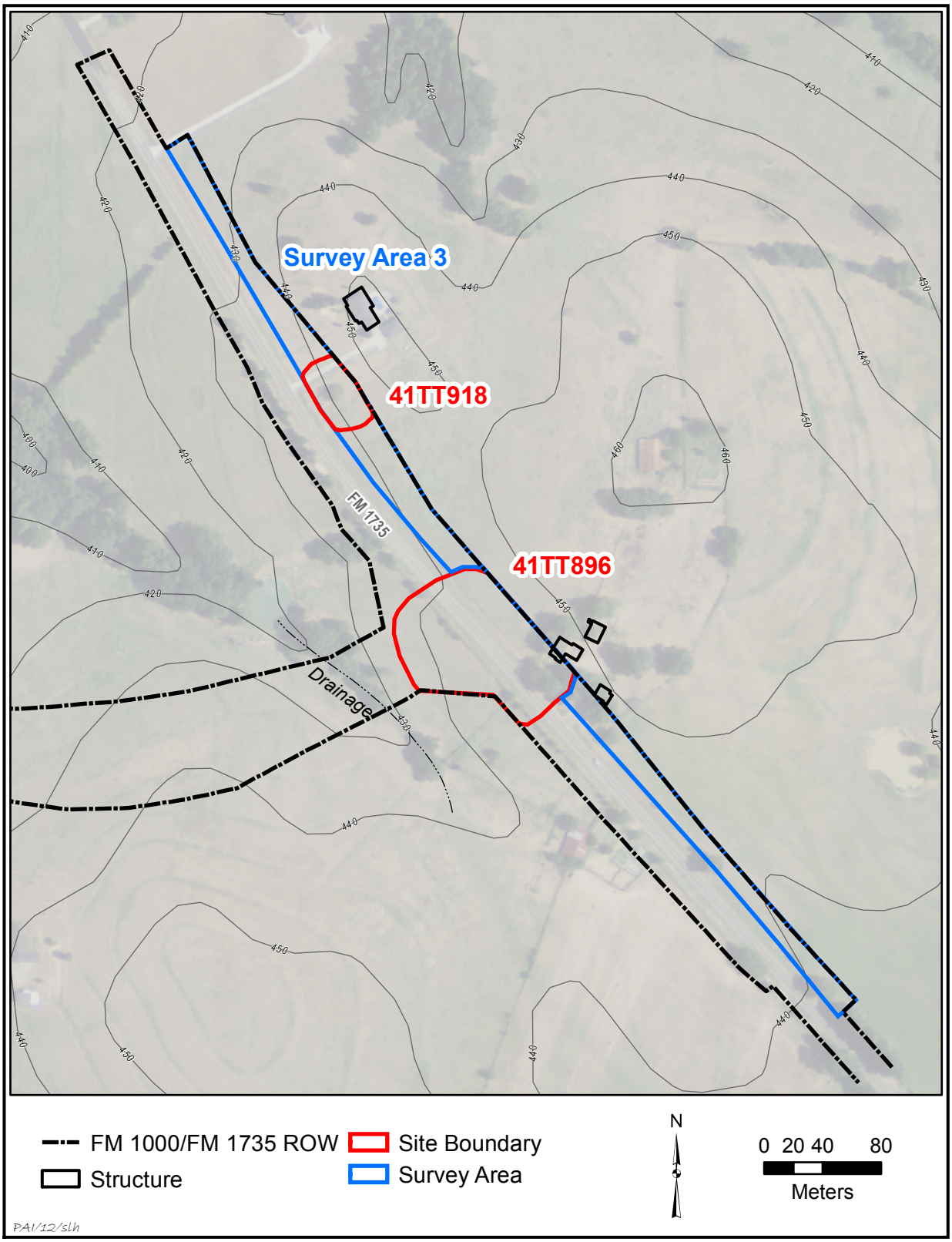

Figure 2. Map showing the location of 41TT896 at the eastern end of the project area.

Figure 3. View to the west-southwest of the portion of 41TT896 southwest of FM 1735 with intermittent drainage beyond.

northwest of the site was considered the possible location of the associated farmstead. The 1909 soils map depicts structures in the immediate vicinity, but no structures are depicted in that location on subsequent aerial photographs or the 1964 USGS map (Tobin International, Ltd. 1935; U.S. Army Map Service 1949; U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service 1963). Historians were unable to run the chain of title prior to a 1947 conveyance of the parcel (O'Kelly et al. 2009:81–82, 85, 89).

The prehistoric component was considered likely to represent short-term, possibly multiple seasonal occupations, with some dating to the Late Archaic period based on the presence of the Yarbrough point (O'Kelly et al. 2009:78, 85, 90). Based on these findings, PBS&J recommended that 41TT896 did not qualify for inclusion in the National Register or designation as a State Archeological Landmark. Consequently, no further work was recommended (O'Kelly et al. 2009:90, 91). However, the Texas Department of Transportation's Environmental Affairs Division concluded that archeological testing of the prehistoric component was needed to determine whether intact buried Archaic deposits are present.

Methods of Investigation

Prior to fieldwork, the proposed project limits and the 41TT896 site boundary were uploaded onto a handheld Trimble GPS receiver to establish the spatial parameters for testing in the proposed FM 1000 right of way southwest of FM 1735 and in the expanded right of way northeast of FM 1735. At the beginning of fieldwork, existing fence lines and a compass and tape were used to place stakes for 19 backhoe trenches (Trenches 1–11 and 13–20) southwest of the highway (Figure 4). These trenches were oriented roughly perpendicular to the southwest FM 1735 right of way fence line, with the closest trenches starting approximately 5 m off the fence to avoid a subsurface water line approximately 2–3 m from the fence. Trenches were spaced approximately 10 m apart northwest-southeast and 5 m apart northeast-southwest. Trench 12 was laid out perpendicular to a surface swale near the northwest edge of the site following excavation of the surrounding trenches. All trenches in this area were about 10 m long, except for Trench 1, which was 4.5 m long.

Trenches 21–23 were staggered across the narrow strip of new right of way northeast of the FM 1735, aligned roughly parallel to the fence

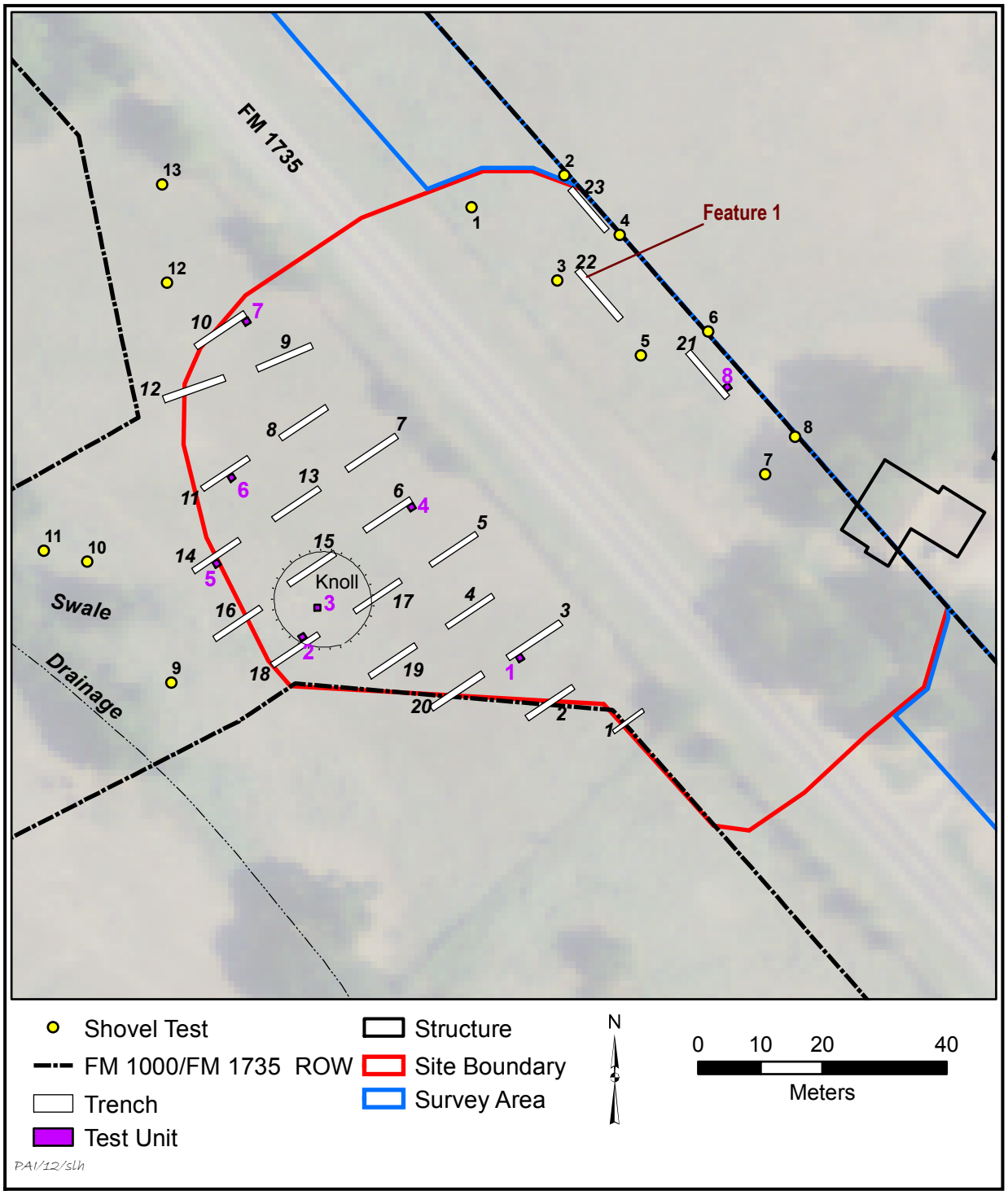

Figure 4. Map showing the locations of shovel tests, trenches, and test units excavated in and around 41TT896.

line. These trenches were set judgmentally with respect to constraints imposed by the limits of the project area, the presence of a subsurface water line northeast of the FM 1735 right of way fence, and the location of an occupied residence. These trenches also were about 10 m long.

Trench excavation was completed using a backhoe fitted with a 0.9-m-wide toothless

bucket. A total of 222.7 linear meters of trenches were excavated among 23 trenches (up to 24 trenches were proposed in the scope of work), which ranged from 4.5 to 10.8 m in length (Table 1). Not counting Trench 1, the average trench length was 9.9 m. Trenches 1–20 account for 6 percent of the site area southwest of FM 1735, and Trenches 21–23 account for 2 percent of the area northeast of the FM 1735. Trenches ranged from 0.25 to 0.63 m deep, for an average of 0.50 m. Approximately 112 m^3 of sediment was removed during trench excavation. Sediments corresponding with one or more zones of the Bt horizon were exposed in all of the trenches. Trench 1 truncated an infilled shovel test (possibly PBS&J Shovel Test 15).

A barbed wire fence was erected around the trenched area southwest of FM 1735 to keep out livestock during the field investigation. Due to a shortage of fence wire, Trenches 22 and 23 were cleaned, recorded, and backfilled on the same day they were excavated. The remaining fencing material was set around Trench 21, which was left open for subsequent test unit excavation because visual inspection suggested that it had the most intact (albeit still disturbed) sediment profile of the trenches in this part of 41TT896.

Trench walls and floors were monitored for artifacts, cultural features, and other anomalies during mechanical excavation, and observed artifacts were collected and retained for analysis. All of the trench side walls and some of the

Table 1. Dimensions of trenches and test units at 41TT896

No.	Length (m)	Width (m)	Depth (m)	m^2	m^3
Trench 1	4.5	1.0	0.50	4.5	2.25
Trench 2	10.2	1.0	0.50	10.2	5.10
Trench 3	10.8	1.0	0.49	10.8	5.29
Trench 4	10.2	1.0	0.52	10.2	5.30
Trench 5	10.5	1.0	0.48	10.5	5.04
Trench 6	9.8	1.0	0.63	9.8	6.17
Trench 7	10.1	1.0	0.50	10.1	5.05
Trench 8	9.6	1.0	0.50	9.6	4.80
Trench 9	10.0	1.0	0.50	10.0	5.00
Trench 10	10.0	1.0	0.50	10.0	5.00
Trench 11	9.5	1.0	0.49	9.5	4.66
Trench 12	9.8	1.0	0.25	9.8	2.45
Trench 13	9.5	1.0	0.45	9.5	4.28
Trench 14	9.4	1.0	0.53	9.4	4.98
Trench 15	9.7	1.0	0.60	9.7	5.82
Trench 16	9.7	1.0	0.55	9.7	5.34
Trench 17	9.8	1.0	0.50	9.8	4.90
Trench 18	9.7	1.0	0.56	9.7	5.40
Trench 19	9.8	1.0	0.50	9.8	4.90
Trench 20	10.5	1.0	0.50	10.5	5.25
Trench 21	9.6	1.0	0.55	9.6	5.28
Trench 22	10.7	1.0	0.51	10.7	5.45
Trench 23	9.4	1.0	0.45	9.4	4.23
Total				222.7	111.94
Test Unit 1	1.0	1.0	0.40	1.0	0.40
Test Unit 2	1.0	0.5-1.0	0.50	1.0	0.45
Test Unit 3	1.0	1.0	0.47	1.0	0.47
Test Unit 4	1.0	1.0	0.42	1.0	0.42
Test Unit 5	1.0	1.0	0.40	1.0	0.40
Test Unit 6	1.0	1.0	0.35	1.0	0.35
Test Unit 7	1.0	1.0	0.40	1.0	0.40
Test Unit 8	1.0	1.0	0.45	1.0	0.45
Total				8.0	3.34

trench ends were scraped and cleaned with shovels and trowels. A Trench Excavation Record Form was used to record trench dimensions, the presence/absence of artifacts and cultural deposits, and other characteristics in each trench. In addition, the sediments exposed were described and recorded, and sketches showing observed strata across the length of one trench wall were completed for all trenches. Photographs were taken of the sediment columns in Trenches 3, 6, 11, 14, 16, 18, and 21–23, and 2-m-wide profiles were completed at the locations of planned test units in Trenches 3, 6, 10, 11, 14, and 18.

Once trench cleaning and recording were completed, seven 1x1-m test units were set off the walls of the above-mentioned trenches and Trench 21 (see Figure 4). Test Units 1 and 2 were placed above anomalies visible in Trenches 3 and 18, respectively. Test Units 4–8 were spaced out across the site area. Test Unit 3 was placed near the top of a low rise that crested between Trenches 15, 16, and 18 in the west part of the site, since almost 70 percent of the trench-derived prehistoric artifacts came from those three trenches, all of which truncated the outer edges of the landform. Test Unit 3 was positioned to recover a controlled artifact sample from the thicker surface sediments on the rise.

A datum was set adjacent to the corner with the highest surface elevation in each test unit, with datum heights typically 10 cm above the surface. Unit excavation typically proceeded in 10-cm levels below datum. These elevations were later converted to below-surface measurements. Slight discrepancies in the first-level measurements for Test Units 3 and 4 mark adjustments made to end each level at the next 10-cm increment after surpassing variation in surface slope. Variation in the thickness of the last levels in Test Units 6 and 7 reflect judgments made when unit excavation extended into Bt horizon sediments. In Test Unit 2, only half of the bottom level was excavated since it was completely within the Bt horizon. Test unit excavation was terminated at or slightly below the Bt horizon contact. Unit depths ranged from 35 to 50 cm (see Table 1). Excavation Record Forms were used to record information for the test units. Completed units were photographed.

A total of 3.34 m^3 of sediment was excavated from the test units. Though the total volume is less than the 5–6 m^3identified as the maximum in the scope of work, the number of units excavated is appropriate given the lack of prehistoric features (the scope specified a minimum of five test units in the absence of features) and the sparse archeological remains. The level of effort expended in testing this site (19 person-days) is considered to represent a reasonable and good-faith effort, given its size and contents. All of the excavated sediment was screened through 1/4-inch-mesh hardware cloth, and all artifacts were collected and retained for analysis.

Eight shovel tests (seven were proposed in the scope of work) were excavated in two transects in the proposed new right of way northeast of FM 1735 (see Figure 4). Transects followed the alignment of the existing right of way fence line. These tests were excavated prior to trench excavation in that part of the site. The southeast third of this segment of the site was not tested because it includes the yard and driveway of an occupied residence. Five additional shovel tests were excavated within the proposed new right of way southwest of FM 1735 to confirm the boundary of the site in this direction. All tests extended to the B horizon at depths varying from 25 to 65 cm (average = 43 cm). The tests were excavated in 20-cm levels, and the sediments removed were screened through 1/4-inch-mesh hardware cloth. A Shovel Test Record Form was used to record brief sediment descriptions and notes about artifact recovery.

The artifacts recovered were taken to the Prewitt and Associates laboratory in Austin. Laboratory processing consisted of washing, identifying, and cataloging the recovered cultural materials. Materials were classified according to the following categories: debitage, chipped stone tool, vertebrate faunal element, glass, historic ceramic, metal, brick fragment, and other. Artifact types or styles were identified within each category when possible. Lithic material type was identified for each of the chipped stone artifacts. The assemblage was prepared for curation according to the standards of the Texas Archeological Research Laboratory at the University of Texas at Austin, where the artifacts and all field records are curated.

Site Sediments

In general, the trenches southwest of FM 1735 exhibited three sediment zones consisting of a thin Ap horizon above a thicker E horizon that was underlain by a Bt horizon (Figure 5).

The thickness of the E horizon tends to increase downslope from northeast to southwest, and thicker surface sands were also encountered on two low rises truncated by Trenches 11, 15, 17, and 18. The sediments ranged from damp to saturated, and groundwater pooled on many of the trench floors, particularly on upper and mid slopes where abundant ironstone inclusions were present. The transition between the Ap and E horizons varied from clear to diffuse depending on the level of surface disturbance. The boundary between the E and Bt horizons ranged from clear to gradual.

one. Although this distinction was only marked by a subtle visual difference in the trench wall, the clay in the lower zone was much more obvious during the excavation of Test Unit 6.

The E horizons were typically composed of soft, loosely consolidated, well- to moderately sorted fine-grained sands, silty sands, and sandy loams with some small hematitic gravels, occasional larger clasts of ironstone, very occasional carbon flecks, and rare prehistoric and historic artifacts. Sediment structure varied from typically massive to weakly and moderately granular. Ferrous staining was observed within

Figure 5. Photograph of the northwest wall of Trench 18 at 41TT896.

The Ap horizons were composed of soft, massive to moderately granular, moderately to well-sorted fine-grained sands, loamy sands, and sandy loams with common small to fine roots, some small hematitic gravels, and occasional historic and prehistoric artifacts. Widely dispersed carbon flecks were observed in this horizon in about a quarter of the trenches. Ferrous staining was often visible in the lower portion of this zone, typically along the transition between the Ap and E horizons. Distinct Ap horizons were discontinuous in some of trenches. Two Ap horizons were identified in an area of deeper, extensively bioturbated surface sands in Trench 11. The lower of the two contained a slightly higher percentage of clay than the upper

this horizon in many of the trench exposures, particularly along the Ap-E transition. The upper and lower portions of the E horizons often exhibited mottling derived from the overlying and underlying stratigraphic zones. Clay content increased with depth within the E horizon in about half the trenches.

The basal zone in most trenches consisted of slightly hard sandy clay, sandy clay loam, and clay, sometimes with redoximorphic concentrations and ferrous concretions. Sediment structure varied from massive to strongly granular and is probably blocky to prismatic when dry. Infilled vertic features were discernible in some exposures. Frequencies of small to medium-sized ironstone gravels and larger clasts up to 10 cm

in length varied from occasional to abundant. Ironstone was most prevalent along the E-Bt horizon contact in some instances. The frequency of tabular ferrous cobbles on the trench floors and in the lower Bt horizon sediments in Trenches 1, 3–8, and 20 suggested proximity to the C horizon. Bt2 horizons were present in Trenches 11 and 18 and possibly Trenches 19 and 20. Although similar in color and composition to the overlying Bt1 horizons, the Bt2 horizons were characterized by the inclusion of irregular peds of red clay about 1 cm across.

The only notable horizontal variation in the sediments in the part of the site southwest of FM 1735 probably relates to erosion and deposition associated with shallow swales there. These shallow surface drainages suggest that this portion of the site was and is affected by overland flow. This probably explains two lenses of fine-grained sand without inclusions or discernible laminations noted at the southwest end of Trench 16, which truncated the north side of a swale that trends westward into the larger intermittent drainage west of the site. Shovel Test 11 adjacent to the drainage west of the site had only 10 cm of surface sand above a Bt horizon with large ironstone inclusions, indicating it was in an eroded area.

Trenches 21–23 northeast of FM 1735 revealed essentially the same three sediment zones that were visible in trenches southwest of the highway, though the sediments in these trenches were more disturbed. As on the opposite side of the highway, these trenches often were very wet, with groundwater pooling on some trench floors. These conditions hindered judgments concerning sediment structure in particular. The thin Ap horizon consisted of a massive to weakly granular, moderately sorted fine sandy loam with some hematitic gravels. Large ironstone cobbles were common throughout the Ap horizon in Trench 22, and several were visible along the Ap-E horizon transition in Trench 23. Ferrous staining was visible along the clear to gradual Ap-E horizon boundary. The E horizon was composed of moderately to poorly sorted, generally massive, fine-grained sand and sandy loam with moderate to abundant small ironstone gravels and occasional fist-sized clasts and larger cobbles (Figure 6). Moderate ferrous staining was apparent throughout. The vertical orientation of some of the staining and the suspended ironstone is indicative of vertic features. Transition to the underlying Bt horizon was gradual. The basal horizon was a sandy loam that quickly graded into sandy clay loam

Figure 6. Photograph of the northeast wall of Trench 21 at 41TT896. The voids in the wall are derived from the removal of ironstone clasts during wall cleaning.

and sandy clay with increased depth. Sediment structure appeared massive (likely due to its water content). The frequency of ironstone clasts increased with depth in the Bt horizon, and irregular clasts up to 25 cm in length were common in Trench 22. Ironstone was also pervasive along the floor of that trench.

Results of Investigations

Testing at 41TT896 identified a possible historic feature (Feature 1) and recovered 52 prehistoric artifacts, 59 historic artifacts, and an unburned faunal bone fragment. Artifacts were recovered from the surface, 2 shovel tests, all 8 test units, 12 trenches, and the possible historic feature (Table 2).

No cultural features relating to Native American use of 41TT896, or even scattered burned rocks indicating disturbed features, were identified. The 52 prehistoric artifacts consist of 4 chipped stone tools and 48 pieces of lithic debitage. Aside from 1 small flake of nonlocal chert, the assemblage is composed of locally available Ogallala chert, quartzite, and silicified wood.

The chipped stone tools consist of three Gary dart points and a medial dart point blade fragment (Figure 7). All were fashioned from quartzite. Common in east Texas and Louisiana, Gary points are characterized by relatively crude manufacture, a thick triangular body, squared shoulders, and a contracting stem (Turner and Hester 1999:123). These traits describe well the point fragment found on the surface prior to trench excavation (Figure 7a). Made from coarser material than the other specimens, this proximal-medial dart point fragment has a short triangular stem and concave blade margins. The tip was damaged and reworked prior to the bending fracture that left the point in its current condition. This dart point fragment is 40.12 mm long and 31.32 mm wide and has a maximum thickness of 9.10 mm. The Gary dart point found in a thin layer of backdirt along the northwest wall of Trench 18 has a short triangular stem, prominent shoulders, and concave blade edges (Figure 7b). Slight thermal discoloration is evident on the distal half of the blade. This dart point is 53.95 mm long and 30.69 mm wide and has a maximum thickness of 8.49 mm. The basal portion of a Gary point recovered from Test Unit 7, Level 3, has a well-formed triangular stem and shoulders (Figure 7c). Pressure-flaking scars are evident on the stem and short blade margin remnants. A bending fracture truncated this point about 8 mm above the shoulders. This specimen is 24.23 mm long and 36.93 mm wide and has a maximum thickness of 7.16 mm. The well-made medial blade fragment was recovered from the floor of Trench 15 after cleaning the northwest trench wall (Figure 7d). The margin remnants are straight to slightly convex. Unifacial retouch is evident on one side of the fragment. The bending fractures at the distal and proximal ends are suggestive of manufacturing failure. This fragment is 22.48 mm long, 26.28 mm wide, and 5.33 mm thick.

The 48 pieces of debitage consist of 21 flakes, 25 flake fragments, and 2 pieces of shatter; 33 are quartzite, 12 are chert (11 local and 1 nonlocal), and 3 are silicified wood. The majority are derived from hard-hammer reduction. The assemblage includes 3 soft-hammer flakes, and 1 of these, a white chert flake derived from bifacial retouch, is the only obviously nonlocal material in the assemblage. No obvious flake tools are present, but a short margin on 1 quartzite flake fragment retains flake scars that may be the result of unifacial retouch.

The majority of the prehistoric artifacts (96 percent) were recovered from the surface, seven trenches, and six test units southwest of FM 1735; the lack of artifacts in the shovel tests west and northwest of this area indicates that the site does not extend beyond the boundary shown on Figure 4 (see Table 2). Two flake fragments collected in the lowest level of Test Unit 8 are the only prehistoric artifacts recovered northeast of FM 1735, indicating that the prehistoric deposits are very sparse in that area. Of the 38 artifacts from test units, 15 came from Level 2, and 9 (including a Gary point fragment) came from Level 3. Level 4 yielded 6 items, and Levels 1 and 5 each contained 4. Hence, 74 percent were in the upper ca. 30 cm. Test Units 3 and 5 are the only units in which prehistoric artifacts were recovered from all levels above the Bt horizon contact.

Twenty-eight of the 50 prehistoric artifacts recovered southwest of FM 1735 were from the discrete low rise at the southwest edge of the site: 18 from Test Unit 3 atop the rise, 9 from Test Unit 2 and Trenches 15 and 18, and 1 from the surface. In addition, 2 flakes were recovered from Trench 16 backdirt downslope from the rise, and 9 artifacts were recovered from Trenches 11 and

Table 2. Artifacts recovered in testing at 41TT896

Provenience	Debitage	Chipped Stone Tool	Bone	Glass	Historic Ceramic	Metal	Brick	Other	Total
Surface	0	1	0	0	0	0	0	0	1
Shovel Test 4									
Level 1 (0–20 cm)	0	0	0	0	0	0	0	0	0
Level 2 (20–40 cm)	0	0	0	0	1	0	0	0	1
Shovel Test 8									
Level 1 (0–20 cm)	0	0	1	4	1*	1	0	0	7
Level 2 (20–25 cm)	0	0	0	2	0	0	0	0	2
Test Unit 1									
Level 1 (0–10 cm)	0	0	0	0	1	0	0	0	1
Level 2 (10–20 cm)	1	0	0	0	0	0	0	0	1
Level 3 (20–30 cm)	0	0	0	0	0	0	0	0	0
Level 4 (30–40 cm)	0	0	0	0	0	0	0	0	0
Test Unit 2									
Level 1 (0–10 cm)	0	0	0	0	0	0	0	0	0
Level 2 (10–20 cm)	2	0	0	0	0	0	0	0	2
Level 3 (20–30 cm)	0	0	0	0	0	0	0	0	0
Level 4 (30–40 cm)	0	0	0	0	0	0	0	0	0
Level 5 (40–50 cm)	0	0	0	0	0	0	0	0	0
Test Unit 3									
Level 1 (0–7 cm)	1	0	0	0	0	0	0	0	1
Level 2 (7–17 cm)	3	0	0	1	0	0	0	0	4
Level 3 (17–27 cm)	6	0	0	0	0	0	0	0	6
Level 4 (27–37 cm)	4	0	0	0	0	0	0	0	4
Level 5 (37–47 cm)	4	0	0	0	0	0	0	0	4
Test Unit 4									
Level 1 (0–12 cm)	1	0	0	0	1	0	0	0	2
Level 2 (12–22 cm)	4	0	0	0	1	1	0	0	6
Level 3 (22–32 cm)	0	0	0	0	0	0	0	0	0
Level 4 (32–42 cm)	0	0	0	0	0	0	0	0	0
Test Unit 5									
Level 1 (0–10 cm)	2	0	0	0	0	0	0	0	2
Level 2 (10–20 cm)	3	0	0	0	1	0	0	0	4
Level 3 (20–30 cm)	2	0	0	0	0	0	0	0	2
Level 4 (30–40 cm)	0	0	0	0	0	0	0	0	0
Test Unit 6									
Level 1 (0–10 cm)	0	0	0	0	0	0	0	0	0
Level 2 (10–20 cm)	0	0	0	1	0	0	0	0	1
Level 3 (20–30 cm)	0	0	0	0	0	0	0	0	0
Level 4 (30–35 cm)	0	0	0	0	0	0	0	0	0

Table 2, continued

Provenience	Debitage	Chipped Stone Tool	Bone	Glass	Historic Ceramic	Metal	Brick	Other	Total
Test Unit 7									
Level 1 (0–10 cm)	0	0	0	0	0	0	0	0	0
Level 2 (10–20 cm)	2	0	0	4	0	3	0	0	9
Level 3 (20–30 cm)	0	1	0	0	0	0	0	0	1
Level 4 (30–40 cm)	0	0	0	0	0	0	0	0	0
Test Unit 8									
Level 1 (0–10 cm)	0	0	0	1	0	0	0	0	1
Level 2 (10–20 cm)	0	0	0	5	2	2	1	0	10
Level 3 (20–30 cm)	0	0	0	4	1	0	0	1	6
Level 4 (30–45 cm)	2	0	0	1	1	2	0	1	7
BHT 5	1	0	0	0	0	0	0	0	1
BHT 8	0	0	0	1	2	0	0	0	3
BHT 9	0	0	0	0	1	0	0	0	1
BHT 10	1	0	0	0	0	0	0	0	1
BHT 11	1	0	0	1	0	3	0	0	5
BHT 13	0	0	0	0	1	0	0	0	1
BHT 14	1	0	0	0	0	0	0	0	1
BHT 15	3	1	0	0	0	0	0	0	4
BHT 16	2	0	0	0	0	0	0	0	2
BHT 18	2	1	0	0	0	0	0	0	3
BHT 21	0	0	0	0	3	0	0	0	3
BHT 22	0	0	0	1	0	0	0	0	1
Feature 1	0	0	0	0	1	0	0	0	1
Total	48	4	1	26	18	12	1	2	112

*Lost

14 and Test Unit 5 northwest of the rise. Thus, 78 percent of the prehistoric artifacts recovered southwest of FM 1735 are from a roughly 40x20-m area in the southwest portion of the site. This concentration of materials could represent a single occupation or activity area, although the sparseness of materials, lack of features, and lack of datable materials and situation in a nonaggrading landform make it impossible to be sure. Further, the modern surface topography suggests that some artifacts in this part of the site could be out of context, having been moved downslope by erosion and overland flow. The other prehistoric artifacts found on this side of the highway were distributed between Test Units 1, 4, and 7 and Trenches 5 and 10, which span almost the full length of the tested area.

In contrast, the historic materials were scattered widely and sparsely southwest of FM 1735 and were most abundant northeast of the highway. The single possible historic feature, Feature 1, is an infilled disturbance identified at the northwest end of Trench 22. Although believed to be of historic age, pit fill has been in place long enough for development of an Ap horizon across the top of the feature. Visible in both trench walls, Feature 1 was clearly parabolic in cross section in the northeast wall and more roughly so in the southwest wall, with more irregular and subtler margins (Figure

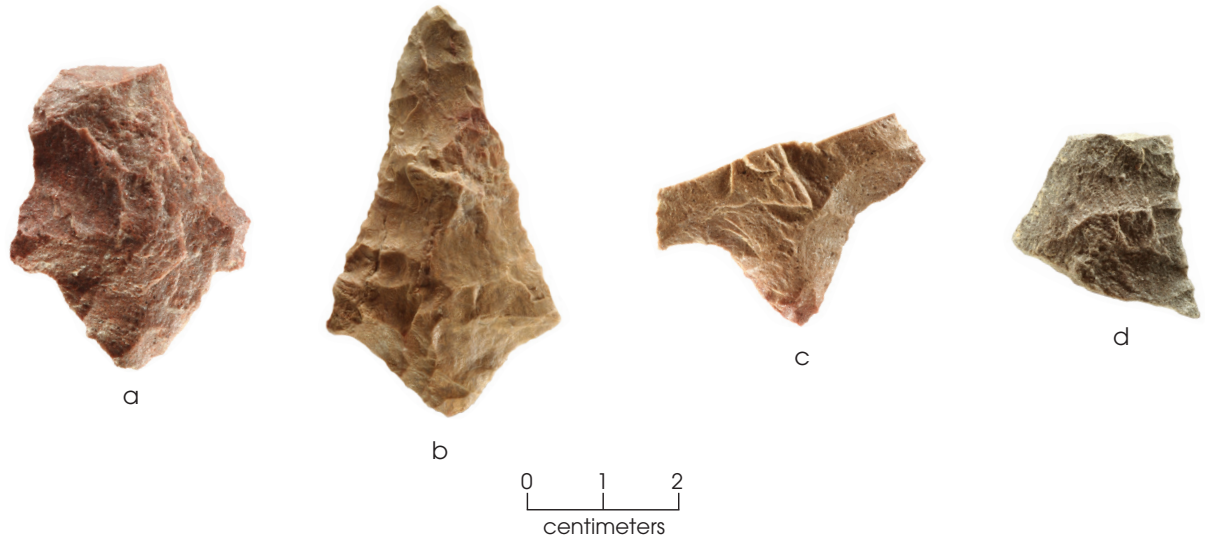

Figure 7. Chipped stone tools from 41TT896. (a) Gary dart point fragment from the surface; (b) Gary dart point from backdirt along Trench 18; (c) Gary dart point fragment from Test Unit 7, Level 3; (d) medial dart point fragment from Trench 15.

8). It had maximum horizontal dimensions of 1.60 m on the northeast trench wall and 1.10 m on the southwest exposure and extended to a depth of about 40 cm below the surface. A lens of fine hematitic gravels was at its base in the northeast exposure, whereas a pocket of similar gravels was well above the pit floor in the southwest trench wall. Numerous irregular ironstone rocks and cobbles were visible in the southwest profile, and more were removed from this general area during trench excavation. A historic ceramic vessel fragment was found in the upper portion of the pit's fill (14 cm below surface) in the northeast profile. No indication of a linear feature (such as an erosion cut) was visible at the surface, but the ground in the surrounding area was hummocky, suggesting historic or modern disturbance, and Trench 22 truncated a roughly square depression that was obvious on the surface only a few meters southeast of Feature 1 (this depression also was old enough for Ap horizon development).

Figure 8. Photograph of cross section of Feature 1 in the northeast wall of Trench 22 at 41TT896.

These disturbances could relate to the buried water line between Trench 22 and the right-of-way fence to the southwest, or perhaps to other activities associated with the residence not far to the southeast. The nature of Feature 1, the recovery of a historic sherd from it, its apparent association with the square depression, and its location well removed from the part of the site containing most of the prehistoric artifacts indicate that it is of historic age.

The 59 historic artifacts consist of 26 pieces of glass, 18 historic ceramic sherds, 12 metal fragments, a brick fragment, a piece of plastic, and fragments of a wood and graphite pencil. In addition, a faunal rib fragment was recovered along with historic artifacts in Shovel Test 8. The bone is unburned, bears no tool marks, and is likely of recent derivation.

The glass assemblage includes a complete Coca-Cola bottle from the Pittsburg, Texas, Bottling Works and pieces of clear, brown, aquamarine, solarized amethyst, milk, and possible white glass. Identifiable fragments include parts of bottles (n = 6), a jar base fragment, an embossed bottle/jar fragment, and a possible cap liner fragment. The remainder include a lip fragment (vessel type indeterminate), pieces of indeterminate vessels (n = 6), flat pieces (n = 5), curved sherds (n = 3), and a piece of unidentifiable glass.

The historic ceramic assemblage is composed of pieces of porcelain (n = 5), semiporcelain (n = 3), semiporcelain/ironstone (n = 1), ironstone (n = 5), stoneware (n = 3), and earthenware (n = 1). Identifiable sherds include six pieces of tableware, two rim sherds, part of a crock base, a jar/vessel fragment, and a vessel fragment. Two pieces of tableware and one of the rim sherds bear embossed designs. More than 70 percent of the ceramics are white with clear glazes; salt and alkaline glazes are also represented.

Recovered metal artifacts include a strap hinge, wire nails and nail fragments (n = 5), two unidentifiable nail fragments, a fence staple, and three unidentifiable metal fragments. A brick fragment and a piece of plastic were recovered at 20–30 cm in Test Unit 8. The pencil segment was collected from 30 to about 40 cm in the same test unit.

Over 60 percent of the historic artifacts were recovered northeast of FM 1735 (36 of 59 artifacts). Most of that material was collected from Test Unit 8. Artifacts were also recovered from Shovel Tests 4 and 8 and Trench 22. The functional categories and twentieth-century ages represented by the artifacts recovered from this part of the site suggest that most of the material is derived from the adjacent house and nearby outbuildings, which likely served as the center for a larger agricultural complex (see discussion of 41TT918 in Survey Area 3). The 23 historic artifacts recovered southwest of FM 1735 were widely dispersed across the tested area, but 65 percent of these items were recovered from trenches and test units located closest to the highway, implying that some could be highway-related trash.

As a whole, the historic materials, consisting of domestic debris and building and fencing items, appear to relate mostly to occupation of the farm at the east corner of the present site boundary since at least the 1930s (see discussion of 41TT918 in Survey Area 3). Some other materials, in particular, brown glass probably representing beer bottles from Test Units 7 and 8 close to the existing highway right of way, may be roadside trash. The only item that could be early twentieth century or older is a single solarized amethyst glass sherd in Test Unit 8. The other artifacts are more in keeping with the broad age range implied by the still-occupied residence at the east edge of the site, which was in place at least as early as 1935 and appears to have served as the center of a larger agricultural complex through at least the early 1960s.

Assessment and Recommendations

Test excavations at 41TT896 revealed low-density scatters of prehistoric (4.8 artifacts/m^2) and historic (4.5 artifacts/m^2) artifacts in thin disturbed surface sediments. The majority of the artifacts are within 30 cm of the modern surface. The one feature identified is of historic age and probably represents a surface disturbance or erosional cut that was partially backfilled with ironstone rocks and cobbles. The historic component, consisting of 59 artifacts along with the single feature, relates to extended occupation of the adjacent farm complex outside the project area to the east, along with trash discard along FM 1735. Because the main part of this complex remains unrecorded outside the project area and

is not being assessed here, archival research to document its associations was not done.

The prehistoric component, which was the impetus for the test excavations, is represented by 4 chipped stone tools and 48 pieces of lithic debitage. No prehistoric cultural features, or even burned rocks indicative of disturbed features, were found. The assemblage suggests short-term, nonintensive use for a limited range of activities. The recovery of Gary dart points and the absence of prehistoric ceramics suggest that the prehistoric assemblage dates to the late part of the Late Archaic period, which is in line with conclusions presented by O'Kelly et al. (2009:78, 85, 90).

Given its insubstantial nature, association with farmstead activities centered outside the project area, low integrity, and twentieth-century age, the historic component of 41TT896 does not have the capacity to contribute important information. The prehistoric component also does not contain important information, based on the lack of features, sparseness of artifacts, lack of datable materials, low integrity, and thinness of the surface sediments. Given these characteristics, there is no potential for isolating prehistoric occupations that could be interpreted with any confidence. Hence, neither component is eligible for listing in the National Register of Historic Places under Criterion D (36 CFR 60.4; 36 CFR 800.4, 5) or designation as a State Archeological Landmark (13 TAC 26.2, 8).

TESTING AND MECHANICAL SCRAPING AT 41TT906

Setting

Site 41TT906 was recorded as a prehistoric Caddo site during the PBS&J survey of the second proposed FM 1000 alignment in 2008 (O'Kelly et al. 2009). Most of it is outside the proposed right of way, with only two arms extending southward into it (Figure 9). The site is on a series of low rises at the east edge of the Hart Creek floodplain, about 60 m east of the Hart Creek relief channel and 400 m east of Hart Creek itself. Area topography gradually rises to the east and south from an average site elevation of 305 ft (Figure 10). An entrenched, intermittent, westward-flowing drainage and shallower surface swales cross through the site and close to it from the uplands to the east. Most of the surrounding property was cleared of trees in the late 1960s and is currently utilized as cattle pasture.

The irregular, roughly U-shaped site area recorded by PBS&J encompasses ca. 7,000 m^2 and has approximate maximum dimensions of 125 m east-west by 70 m north-south. The segments of the site within the current proposed right of way are a narrow western lobe with approximate maximum dimensions of 45x25 m and a shorter, wider eastern lobe of 25x35 m. The west lobe encompasses 900 m^2, and the east lobe covers 715 m^2 (horizontal Area of Potential Effects = 0.4 acres; all investigated). This acreage and the larger site area were on privately owned property at the time of the testing investigations. Ownership of the FM 1000 right of way corridor and the site areas within it had been transferred to Titus County by the time of the mechanical scraping. Project schematics show the site will be impacted by cutting to a maximum depth of 0.5 m in the eastern part of the site and placement of up to 2 m of fill across the western part as part of the approach to a bridge over the Hart Creek floodplain.

Previous Work

Site 41TT906 was defined initially through the excavation of 64 shovel tests within segments of the second and third alternate FM 1000 alignments (O'Kelly et al. 2009:127–128). Prehistoric artifacts were recovered in 13 of those tests, at depths ranging from the surface to 90 cm. Three of the positive tests were within the current project area, but the remainder were to the north. The shovel test assemblage consists of 33 prehistoric artifacts, 3 burned rocks, and 35 fragments of rusted metal (the latter from 1 test). In addition, 2 tests contained carbon that was judged to be of recent derivation (O'Kelly et al. 2009:130). A third test that contained burned clay and charcoal was used to define the south end of the western site lobe, but the testing reported here determined that this too is likely attributable to recent vegetation clearing and burning.

Two backhoe trenches were excavated on low rises within the site. Trench FM 1000-5 was along the eastern edge of the site, north of the intermittent drainage that trends across the eastern site lobe (and north of the final FM 1000 alignment). Trench FM 1000-6 was in the

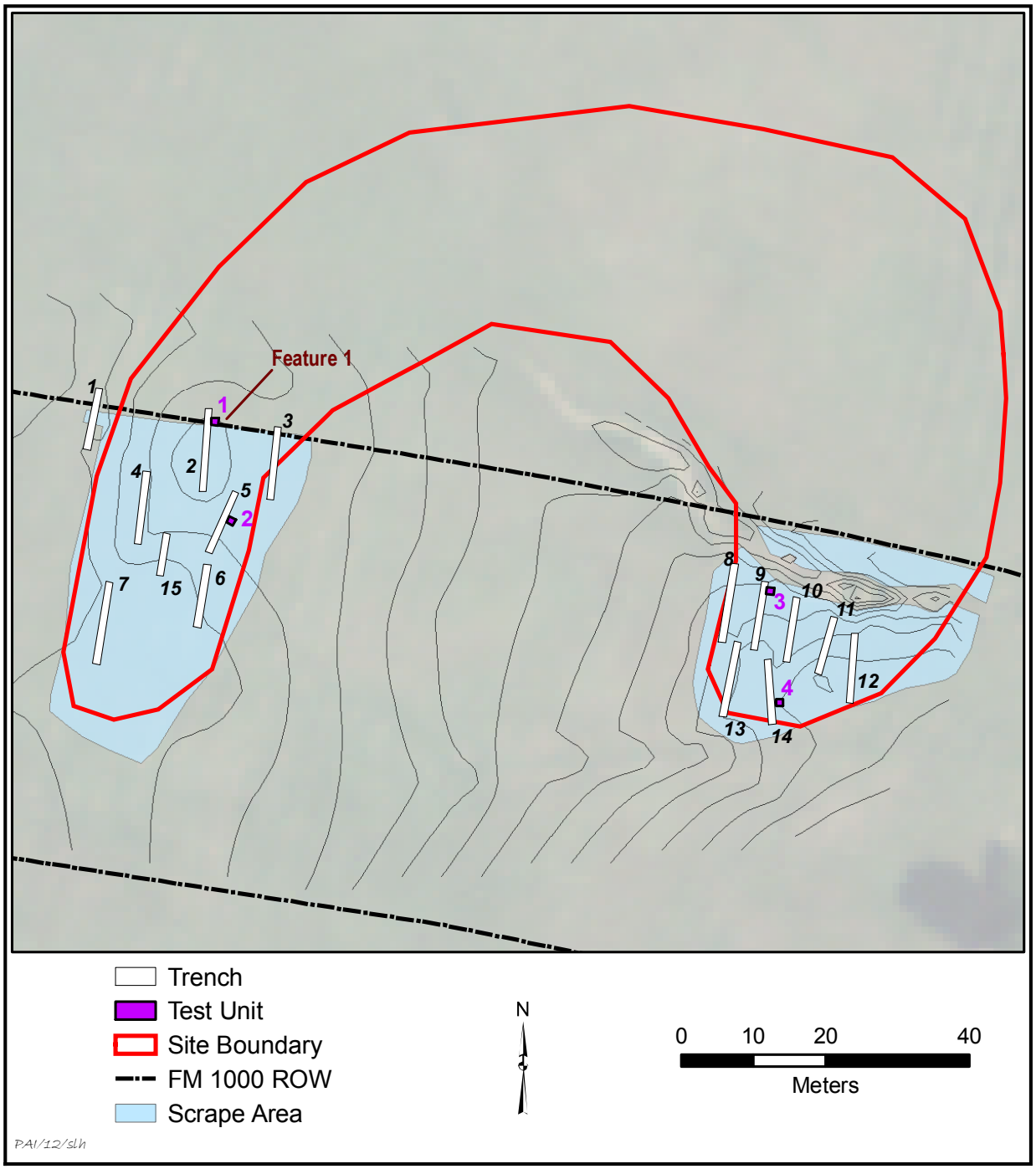

Figure 9. Map showing the locations of trenches, test units, and mechanically scraped areas at 41TT906.

western lobe, just south of the final alignment's north boundary. A prehistoric ceramic sherd was recovered from Trench FM 1000-5, and eight prehistoric artifacts (ceramics, chipped stone, and ground stone) and two burned rocks were found in Trench FM 1000-6. The materials in the trenches were found from 10 to 90 cm below the surface.

The total 41TT906 prehistoric artifact assemblage includes 21 ceramic sherds, a quartzite Perdiz point, 18 pieces of debitage, and 2 possible ground stone fragments. Also identified were 5

a

b

Figure 10. Photographs of the terrain around 41TT906. (a) View to the northwest from the upland margin toward the Hart Creek floodplain; (b) view to the east-southeast across the southern part of the site toward the eastern tested arm and the upland margin beyond.

burned rocks, 6 fragments of burned clay, and 2 bone fragments. Based on the characteristics of the assemblage and the site location on the margin of the Hart Creek floodplain, it was suggested that the identified material likely represented subsistence-related activities at a seasonally occupied locality, with the Perdiz point indicating Middle to Late Caddo occupation. More than 70 percent of the prehistoric assemblage was found within 40 cm of the modern surface, and the Perdiz point and all of the ceramics were recovered in the upper 50 cm. The investigators suggested that the cultural material found below 50 cm (primarily lithic debitage) could indicate multiple occupations or vertical displacement within the sediment column. PBS&J recommended that 41TT906 was potentially eligible for inclusion in the National Register and designation as a State Archeological Landmark and recommended testing for the portion within the final FM 1000 alignment (O'Kelly et al. 2009:149–150).

Methods of Investigation

Prior to testing, the right-of-way corridor in the vicinity of 41TT906 was marked on the ground to facilitate secure identification of the limits of the project area. The proposed FM 1000 corridor and the 41TT906 site boundary were uploaded onto a handheld Trimble GPS receiver to establish the east and west edges of each site lobe at the north right-of-way boundary, and the southernmost extent of each lobe. A compass and tape were used to set trench stakes according to magnetic north in each lobe. Most trenches were spaced about 5 to 10 m apart, but variations in trench spacing and alignments were made according to localized surface topography (low-lying areas were avoided when possible) and trench position with respect to the site boundary. Fifteen trenches were laid out within or adjacent to the two parts of the site located within the proposed final highway alignment (15–20 trenches were proposed in the scope of work). Eight were in the west lobe (Trenches 1–7 and 15), and 7 were set south of the channelized drainage that cuts across the north edge of the east lobe (Trenches 8–14).

Trench excavation was completed using a backhoe fitted with a 0.9-m-wide toothless bucket. A total of 137.3 linear meters of trenches were excavated among 15 trenches that ranged from 5.9 to 11.0 m in length (average = 9.2 m). Trenches 1–7 and 15 account for about 8 percent of the area within and adjacent to the western lobe, and Trenches 8–14 account for about 9 percent of the eastern lobe (13 percent of the area south of the intermittent drainage). Trench depths varied from 0.90 to 1.60 m, averaging 1.20 m (Table 3). Approximately 166 m^3 of sediment was removed during trench excavation. Trench 2 truncated PBS&J Trench FM 1000-6 and Shovel Test 35. The alignment of the trench was such that the previous units were exposed in opposite walls in the southern third of the new trench. Barbed wire fences were erected around the trenches areas to keep livestock out during the field investigations.

Trench walls and floors were monitored for artifacts, cultural features, and other anomalies during mechanical excavation, and observed artifacts were collected and retained for analysis. All of the trench side walls and some trench ends were scraped and cleaned with shovels and trowels. A Trench Excavation Record Form was used to record trench dimensions, the presence/absence of artifacts and cultural deposits, and other characteristics in each trench. In addition, the sediments exposed were described and recorded, and sketches showing observed strata across the length of one trench wall were completed for all of the trenches. At least one photograph was taken of the sediment column in each trench, and 2-m-wide profiles were completed in Trenches 2, 7, and 11.

Once trench cleaning and recording were completed, four 1x1-m test units were hand excavated (see Figure 9). Test Unit 1 was placed above two burned rocks visible in the east wall of Trench 2. Test Units 2 and 3 were placed along Trenches 5 and 9, respectively, because ceramic sherds were recovered from both trenches. Trench 14 was randomly chosen for the placement of the fourth test unit.

A datum was set adjacent to the corner with the highest surface elevation in each test unit, and datum elevations were established with the total station. The highest surface elevation at each unit was used as the starting elevation for unit excavation. Unit excavation typically proceeded in 10-cm levels after removal of the first level surpassed variation in surface slope. The last 0.30 m of Test Unit 3 was removed in a single level in an effort to reach the Bt horizon. Excavation Record Forms were used to record

Table 3. Dimensions of trenches and test units at 41TT906

No.	Length (m)	Width (m)	Depth (m)	m^2	m^3
Trench 1	8.4	1.0	1.00	8.4	8.40
Trench 2	11.0	1.0	1.60	11.0	17.60
Trench 3	10.0	1.0	1.15	10.0	11.50
Trench 4	9.9	1.0	1.00	9.9	9.90
Trench 5	9.3	1.0	1.04	9.3	9.67
Trench 6	8.6	1.0	1.25	8.6	10.75
Trench 7	10.2	1.0	1.25	10.2	12.75
Trench 8	10.7	1.0	0.90	10.7	9.63
Trench 9	8.7	1.0	1.15	8.7	10.01
Trench 10	8.0	1.0	1.50	8.0	12.00
Trench 11	7.7	1.0	1.50	7.7	11.55
Trench 12	9.3	1.0	1.25	9.3	11.63
Trench 13	10.6	1.0	1.34	10.6	14.20
Trench 14	9.0	1.0	1.10	9.0	9.90
Trench 15	5.9	1.0	1.03	5.9	6.08
Total				137.3	165.56
Test Unit 1	1.0	0.5–1.0	1.27	1.0	0.97
Test Unit 2	1.0	0.5–1.0	1.02	1.0	0.75
Test Unit 3	1.0	0.5–1.0	1.37	1.0	0.92
Test Unit 4	1.0	1.0	0.61	1.0	0.61
Total				4.0	3.25

information on the test units. Completed units were photographed.

Test Unit 1 was excavated as a full 1x1-m unit to a depth of about 70 cm before unit size was decreased to 1.0x0.50 m due to low artifact recovery. Additional excavation continued into the top of the Bt horizon, ending at a depth of 130 cm. Test Units 2 and 3 were excavated as 1x1-m units to depths of 50 cm before unit size likewise was decreased due to minimal artifact recovery. Further excavation in Test Unit 2 continued to the Bt horizon contact at a dept of 100 cm. Additional excavation in Test Unit 3 proceeded to about 140 cm before excavation was terminated due to no artifact recovery. The Bt horizon was not exposed in that unit despite its presence in the trench floor approximately 2 m to the south. Test Unit 4 was excavated as a 1x1-m unit to a depth of 60 cm before additional effort was canceled due to no artifact recovery. The Bt horizon was not exposed in that unit either. These differences in the depth of the Bt horizon suggest relict downcutting or channelization derived from surface drainage off the adjacent uplands, a process that is clearly at work today in the channelized drainage that trends across the site within meters of Test Unit 3.

A total of 3.25 m^3 of sediment was excavated between the four test units. This includes a little more than 1.70 m^3 in the west lobe and 1.50 m^3 in the east lobe. Though the total volume is less than the 5–6 m^3 identified as the maximum in the scope of work, the number of units excavated is appropriate given the small sizes of the areas investigated and the sparse archeological remains (the scope of work proposed three units if no features were found). The level of effort expended in testing this site (36 person-days) is considered to represent a reasonable and good-faith effort, given its size and contents. All of the excavated sediment was screened through 1/4-inch-mesh hardware cloth, and all artifacts other than burned rocks were collected and retained for analysis.

Subsequent to the testing, a policy change enacted by the Texas Department of Transportation's Environmental Affairs Division necessitated mechanical scraping in portions of 41TT906 located within the project area to determine whether Native American burials

were present. This final phase of investigation was conducted in July 2012 and included all of the site area within the FM 1000 right of way (see Figure 9). Prior to scraping, the FM 1000 corridor, the 41TT906 site boundary, and the site map generated during testing were uploaded onto a handheld Trimble GPS receiver to reestablish the locations of the east and west site lobes. The Trimble and a metal detector were used to re-locate the datum and backsight used for total station mapping during testing. The datum, backsight, and north right-of-way boundary were marked with stakes. The previously excavated backhoe trenches were still clearly visible, and these were used in conjunction with the redefined right-of-way boundary to mark the limits of the east and west lobe scrape areas.

Mechanical scraping was conducted with a trackhoe fitted with a 1.5-m-wide, smooth-edged bucket that removed sediment in 10–15-cm levels. Scraping in each lobe started just south of the north right-of-way boundary to preserve solid ground for later fence installation. A total of 1,864 m^2 of sediment were mechanically stripped. The east lobe scrape included areas north and south of the entrenched drainage and encompassed a combined total of 760 m^2, ranging from 50 to 105 cm in depth due to variations in surface elevations (Figure 11a). Including the drainage, this block had approximate maximum dimensions of 30 m north-south by 38 m east-west. The west lobe scrape area had approximate maximum dimensions of 50 m north-south by 32 m east-west, covered 1,104 m^2, and ranged from about 35 cm to 90 cm deep (Figure 11b).

Scrape area floors were monitored for artifacts, cultural features, and other anomalies during stripping, and backdirt piles were monitored for artifacts. The floors of both scrape areas were cleaned with flat-bladed shovels to identify soil disturbances. Most were immediately identifiable as previously excavated shovel tests or infilled root tracks and stump voids. Four anomalies were investigated by excavating half of each to verify their derivation; all were judged to be noncultural. The limits of each scrape area were recorded with a total station, and both areas were backfilled with a bulldozer and trackhoe. The trackhoe also was used to reconstruct the drainage that bisects the east lobe. The mechanical scraping required about 24 person-days of effort.

The small artifact assemblage derived from the testing and mechanical scraping was taken to the Prewitt and Associates laboratory in Austin. Laboratory processing consisted of washing, identifying, and cataloging the recovered cultural materials. Given the small assemblage size, artifact analysis was limited to classifying specimens according to basic functional group (ceramic, chipped stone, or ground stone) and identifying styles or artifact types within each group. Other basic characteristics such as ceramic temper and lithic material type were also recorded. Recovered faunal bone was counted and weighed. The assemblage was prepared for curation according to the standards of the Texas Archeological Research Laboratory at the University of Texas at Austin, where the artifacts and all field records are curated.

Site Sediments

The sediments observed throughout the excavated trenches are consistent with the main soil mapped for this area, frequently flooded Nahatche loam silty clay loam (Roberts 1990:43; U.S. Department of Agriculture, Natural Resources Conservation Service 2012b). Disturbed surface sediments in the seven western lobe trenches consisted of well- to moderately sorted sandy silts, silty sands, and sandy loams with some small hematitic gravels and varying frequencies of charcoal derived from modern vegetation clearing. The underlying sediments are well-sorted fine-grained sands, silty sandy loams, and sandy clay loams with redoximorphic features (ferrous staining and ferromanganese concretions) that increase in frequency with depth. Root and rodent krotovina and infilled vertic features are dispersed throughout these sediments. Basal sandy clay was exposed in all of the western lobe trenches except Trench 1. This zone is usually marbled with vertical cracks infilled with pale gray sand (Figure 12). The typical sequence documented in the western lobe trenches includes an Ap horizon, multiple Bg horizons, and a Bt horizon. The Ap horizon was divided into two zones in Trenches 4 and 7 to account for variations in recent surface disturbance, and a discontinuous remnant of buried A horizon was identified in Trench 15. Two Bg horizons were identified in Trenches 1, 4, 6, 7, and 15, and three were identified in Trenches 2, 3, and 5.

Figure 11. Photographs of mechanically scraped areas at 41TT906. (a) View to the west-northwest of the completed east lobe scrape area bisected by drainage; (b) view to the southwest of the completed west lobe scrape area.

Figure 12. View of Test Unit 1 at 41TT906, showing basal sandy clay at the bottom.

Similar profiles were exposed in the seven eastern lobe trenches, though upper and middle sediments typically were much drier in that part of the site (Figure 13). Surface sediments there are well- to moderately sorted fine-grained sands, sandy silts, silty sands, and sandy loams with some small hematitic gravels. Widely dispersed small charcoal fragments were present in the topmost horizon in some trenches. Minor carbonate stippling and manganese concretions were observed in Trench 12, and rare ferrous nodules were observed in Trench 13. Middle sediments, consisting of moderately to well-sorted fine-grained sands, silty sands and sandy silts, sandy loams, and sandy clay loams, exhibited the same redoximorphic features and disturbances identified in the western lobe. The basal sediments in the eastern lobe trenches are clay loam, sandy clay loam, and sandy clay. A single Ap horizon was recorded across all of the east lobe trenches. Two Bg horizons were identified in Trenches 8 and 13, three were identified in Trenches 10–12 and 14, and four were identified between Trench 9 and adjacent Test Unit 3.

Aerial photographs indicate that the site area was cleared of tree cover between 1964 and 1983 (an account supported by a previous landowner [Tom Joyner, personal communication 2011]), and clear evidence of tree felling and burning was exposed in Trenches 4, 7, and 15, which were along the edges of a low-lying swale that encompassed the southern third of the western lobe. Later mechanical stripping exposed extensive carbon deposits in this area as well. The Ap horizon in Trench 15, the southern third of Trench 4, and the southern and central thirds of Trench 7 consisted of carbon-stained sands and sandy silts mixed with variable amounts of carbonized wood, along with fragments and coarse lenses of sediment derived from the underlying zones. Much of the displaced sediment exhibited varying degrees of oxidation, and segments of the Ap-Bg1 horizon contact in the southern portions of Trenches 7 and 15 were also oxidized. Lenses and pockets of oxidized sediment or sediment with high charcoal densities were typically found on or just above the Ap-Bg1 horizon contact and were covered with carbon-stained Ap horizon sediments. It appears

Figure 13. View of the central portion of Trench 11 at 41TT906, showing surface sands with redoximorphic features and basal sandy clayey silt at the bottom.

that this is the area where PBS&J Shovel Test 45 recovered burned clay and charcoal, and thus it is surmised that these remains represent modern vegetation clearing as well. Coupled with the lack of artifacts in Trenches 6, 7, and 15, this indicates that the actual site boundary is north of this area, conforming to slightly elevated terrain surrounding the knoll that is centered along the north edge of the proposed FM 1000 alignment.

Results of Investigations

Testing and mechanical scraping at 41TT906 exposed a burned rock feature and recovered 44 prehistoric artifacts, 10 faunal bone fragments, and 5 small nonfeature burned rocks (Table 4). The artifacts consist of 16 ceramic sherds, a Dalton point, a Yarbrough dart point fragment, an untyped dart point fragment, a unifacial tool, 19 pieces of debitage, a modified hematite fragment, 2 hammerstones, a pitted stone fragment, and an indeterminate ground/battered stone tool fragment. Three sherds and a hammerstone were recovered from four backhoe trenches; 4 sherds, 13 pieces of debitage, the Yarbrough point, the pitted stone, and all the burned rocks and faunal remains are from Test Units 1–3 and Feature 1 in Test Unit 1; the remainder of the assemblage was recovered during mechanical scraping. Three of the sherds, the untyped dart point fragment, a flake, and a hammerstone are from the eastern lobe, and the remainder of the cultural materials are from the western lobe.

Trench 2 exposed two large burned rocks in its east wall, and Test Unit 1 was positioned to expose these rocks. This excavation identified Feature 1, a disturbed burned rock concentration. Feature 1 was first exposed in the lower portion of Level 3 (27–37 cm), and it was excavated concurrent with but independent of the surrounding test unit from the top of Level 4. Feature 1 is a disturbed, C-shaped concentration of burned rocks bordering a mostly rock-free area centered in the unit's southwest quadrant (Figure 14). In addition to originally extending a short distance into Trench 2, the scatter also went into the east half of the unit's south wall. The concentration was composed of several large subangular and angular cobbles

Table 4. Artifacts recovered in testing and mechanical scraping at 41TT906

Provenience	Sherd	Debitage	Chipped Stone Tool	Ground/ Battered Stone	Burned Rock	Bone	Total
Test Unit 1							
Level 1 (0–17 cm)	0	0	0	0	0	0	0
Level 2 (17–27 cm)	0	1	0	0	0	0	1
Level 3 (27–37 cm)	0	2	0	0	0	0	2
Level 4 (37–47 cm)	0	2	0	0	0	0	2
Level 5 (47–57 cm)	0	1	1	0	0	0	2
Level 6 (57–67 cm)	0	0	0	0	3	0	3
Level 7 (67–77 cm)*	0	3	0	0	1	0	4
Level 8 (77–87 cm)*	0	1	0	0	0	0	1
Level 9 (87–97 cm)*	0	0	0	0	0	0	0
Level 10 (97–107 cm)*	0	0	0	0	0	0	0
Level 11 (107–117 cm)*	0	0	0	0	0	0	0
Level 12 (117–127 cm)*	0	0	0	0	0	0	0
Test Unit 2							
Level 1 (0–8 cm)	0	0	0	0	0	0	0
Level 2 (8–18 cm)	1	2	0	0	0	0	3
Level 3 (18–28 cm)	1	1	0	0	0	0	2
Level 4 (28–38 cm)	0	0	0	0	0	0	0
Level 5 (38–48 cm)	0	0	0	0	0	0	0
Level 6 (48–58 cm)*	0	0	0	0	0	0	0
Level 7 (58–68 cm)*	0	0	0	0	0	0	0
Level 8 (68–78 cm)*	0	0	0	0	0	0	0
Level 9 (78–88 cm)*	0	0	0	0	0	0	0
Level 10 (88–98 cm)*	0	0	0	0	1	0	1
Level 11 (98–108 cm)*	0	0	0	0	0	0	0
Test Unit 3							
Level 1 (0–7 cm)	0	0	0	0	0	0	0
Level 2 (7–17 cm)	2	0	0	0	0	0	2
Level 3 (17–27 cm)	0	0	0	0	0	0	0
Level 4 (27–37 cm)	0	0	0	0	0	0	0
Level 5 (37–47 cm)	0	0	0	0	0	0	0
Level 6 (47–57 cm)*	0	0	0	0	0	0	0
Level 7 (57–67 cm)*	0	0	0	0	0	0	0
Level 8 (67–77 cm)*	0	0	0	0	0	0	0
Level 9 (77–87 cm)*	0	0	0	0	0	0	0
Level 10 (87–97 cm)*	0	0	0	0	0	0	0
Level 11 (97–107 cm)*	0	0	0	0	0	0	0
Level 12 (107–137 cm)*	0	0	0	0	0	0	0
Test Unit 4							
Level 1 (0–11 cm)	0	0	0	0	0	0	0
Level 2 (11–21 cm)	0	0	0	0	0	0	0
Level 3 (21–31 cm)	0	0	0	0	0	0	0
Level 4 (31–41 cm)	0	0	0	0	0	0	0
Level 5 (41–51 cm)	0	0	0	0	0	0	0
Level 6 (51–61 cm)	0	0	0	0	0	0	0

Table 4, continued

Provenience	Sherd	Debitage	Chipped Stone Tool	Ground/ Battered Stone	Burned Rock	Bone	Total
Feature 1	0	0	0	1	180	10	191
BHT 2	0	0	0	1	0	0	1
BHT 4	1	0	0	0	0	0	1
BHT 5	1	0	0	0	0	0	1
BHT 9	1	0	0	0	0	0	1
East Lobe Scrape Area	0	1	1	1	0	0	3
West Lobe Scrape Area	9	5	2	2	0	0	18
Total	16	19	4	5	185	10	239

*1.0x0.5 m

interspersed among numerous smaller clasts that varied from subangular and tabular to rounded and irregular in shape. Some of the larger rocks clearly were fractured in situ. Smaller clasts in the east half overlapped in two layers. The exposed portion of the scatter had maximum dimensions of 94 cm north-south by 96 cm east-west and had minimum and maximum depths below the surface of 34 and 46 cm. Feature thickness based on these depths is misleading, however, since the average top and bottom depths for the entire burned rock group are only 4 cm apart (37 and 41 cm). The sediment surrounding the burned rocks was identical to the nonfeature fill above and outside of the concentration in Levels 3 and 4. Although carbon flecks were widely dispersed above Feature 1, no carbonized macrobotanical material, carbon-stained or oxidized sediment, or ash was observed during feature excavation, and no indication of an associated pit or basin was discernible. Clast removal revealed only three small rocks in the south wall of Test Unit 1, which suggests that the feature did not continue far to the south (an adjoining unit was not opened for that reason).

The excavated portion of Feature 1 contained 16.4 kg of thermally altered rocks: 12.1 kg of ferruginous sandstone, 2.2 kg of quartzite (represented only by a large cobble and smaller heat spall), 1.1 kg of hematite, and 1.0 kg of silicified wood. One of the pieces of ferruginous sandstone is a pitted stone. The only other material specifically attributable to Feature 1 are 10 pieces of faunal bone found immediately above and among the rocks, although 5 flakes recovered above, adjacent to, and below the concentration could be associated.

No Native American cultural features, including burials, were found in the mechanical scraping, but this effort yielded almost half the artifacts. These consist of nine prehistoric ceramic sherds, two dart points, the unifacial tool, six pieces of debitage, the modified hematite fragment, a hammerstone, and the indeterminate ground/battered stone tool fragment.

Dalton points, which date to the late Paleoindian period, are characterized by parallel-sided stems with grinding on the stem and basal edges, deeply concave bases, basal thinning or fluting, and beveled, often serrated blade edges (Turner and Hester 1999:99). The Dalton point, recovered in the north-central portion of the west lobe scrape area, is complete except for the extreme distal tip; it is 51.0 mm long, 21.9 mm wide, and 6.9 mm thick (Figure 15a). The base of this chalcedony specimen was thinned by removal of a large flake on one face, and the edges of the slightly expanding stem and concave base are lightly ground. The triangular blade is alternately beveled with weakly serrated lateral edges.

The Yarbrough point, found below Feature 1 during testing, is a quartzite proximal-medial fragment with straight to slightly convex blade edges, slight shoulders, and a parallel to slightly expanding stem (Figure 15b). The distal end was detached by a bending fracture. This specimen is 41.3 mm long, 23.1 mm wide, and 10.5 mm thick. Yarbrough points, which are common in east

Figure 14. Feature 1 at the base of Level 4 in Test Unit 1 at 41TT906.

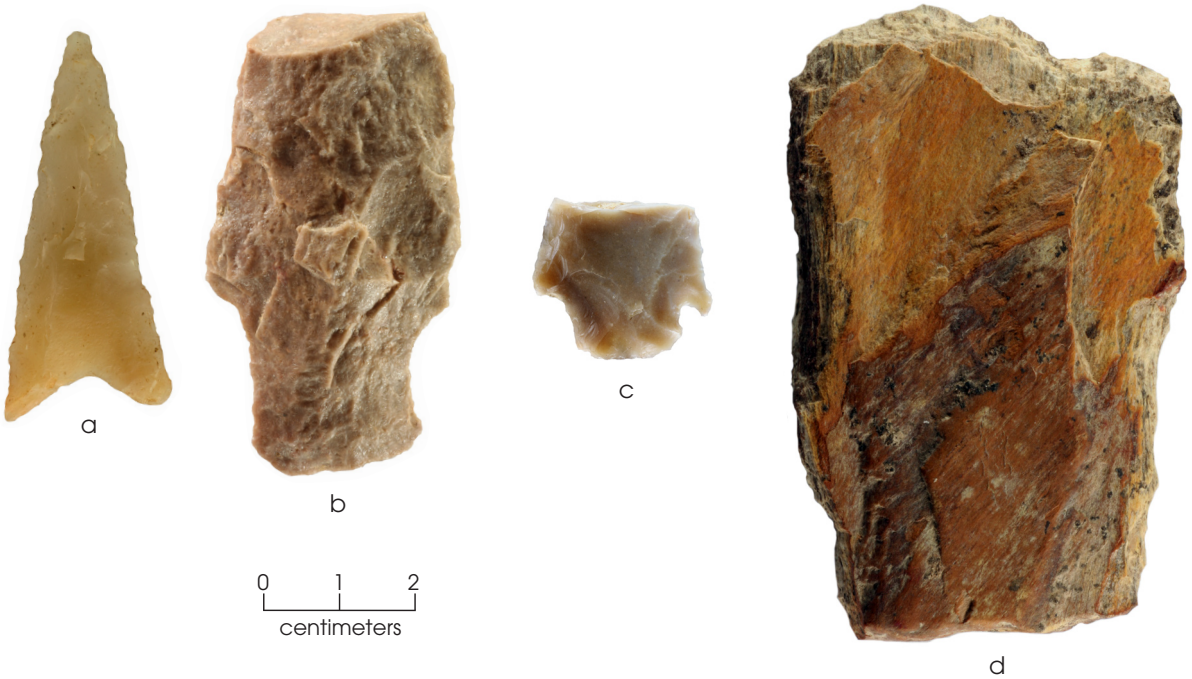

Figure 15. Chipped stone tools from 41TT906. (a) Dalton dart point; (b) Yarbrough dart point fragment; (c) untyped dart point fragment; (d) end scraper.

Texas, are thought to date mostly to the Late Archaic period (Dockall et al. 2008:21).

The untyped proximal-medial dart point fragment was fashioned from nonlocal gray banded chert that may be Edwards chert (Figure 15c). The blade edge remnants are straight, exhibit bifacial pressure flaking, and are moderately serrated. The intact side of the base is clearly corner notched with a distinct shoulder barb. Stem margins are irregular, and its base is flat to slightly convex. A platform remnant of the original flake is evident at one corner of the stem, and the ventral surface of the original flake is evident on one face. Truncated by a bending fracture, this specimen is 21.0 mm long, 23.8 mm wide, and 6.2 mm thick. Although unidentifiable to type, this fragment shows some morphological similarities to variants of the Cossatot type described in Turner and Hester (1999:97), which dates to the Early Archaic period.

A tabular piece of silicified wood exhibits unifacial flake removal on its lateral margins and distal end (Figure 15d). Polish is evident on the ventral surface, and slight rounding is visible along the distal edge of the same surface. Morphology and wear suggest use as an end scraper. This specimen is 83.6 mm long, has a maximum width of 51.9 mm at the distal end, and has a maximum thickness of 12.1 mm at the proximal end.

The 19 pieces of debitage consist of 7 flakes and 12 flake fragments. Ten are of local chert, 4 are of quartzite, 2 are silicified wood, and 1 specimen each is of rhyolite, hematite, and possible Edwards chert. Most reflect hard-hammer reduction, but seven are soft-hammer flakes. The rhyolite flake and the possible Edwards chert flake fragment are bifacial thinning flakes.

Variable smoothing on the cortical surface of an otherwise angular hematite fragment suggests it is derived from an axe preform. Small, closely spaced incisions are present on one segment of the smoothed exterior surface. The hammerstone recovered during testing is a tabular fragment of silicified wood that exhibits variable battering damage at both ends and moderate to severe thermal discoloration. The other hammerstone is a small, naturally rounded cobble of dense ferruginous sandstone with minor battering damage on its ends. The pitted stone fragment from Feature 1 is a thermally fractured piece of ferruginous sandstone with two ground pits on one facet remnant. The indeterminate ground/battered stone tool fragment is a piece of nonferruginous sandstone with percussion marks along its curved margin and on two facet remnants. Battering on the facet remnants created two small pits about 1.0–1.5 cm in diameter that may have been produced during bipolar percussion. Slight smoothing is apparent on one facet, and light to moderate thermal discoloration is evident.

The ceramics consist of 25 sherds and crumbs that refit (or nearly so) to form 16 sherds. They range from 2.0 to 7.9 cm in maximum dimension; they are 7.2–9.4 mm thick, averaging 7.7 mm. All have clayey pastes and clearly are Caddo wares. Seven have both grog and bone as temper, and 9 have just grog. One is a rim with a single fingernail punctation beneath a folded lip (Figure 16a); it appears to be from an everted-rim jar. A single sherd is a fragment of a flat base. The other 14 are body sherds. Eight show no indications of decoration, though with many being small it is impossible to say they are from undecorated vessels. One decorated body sherd has a single appliqué strip (probably vertical) with fingernail punctations on it (Figure 16b). The sherd cannot be typed, but this treatment is common on such Late Caddo types as Harleton Appliqué and Pease Brushed-Incised (Suhm and Jelks 1962:65–66, 119–120). A single large body sherd has brushing that probably was oriented diagonally (Figure 16c); it cannot be typed, but this treatment occurs on such Late Caddo types as Bullard Brushed (Suhm and Jelks 1962:21–22). A single body sherd has an engraved line with a short engraved line dropping from it (Figure 16d); it cannot be typed. One body sherd has two straight incised lines but is otherwise undistinctive. Two other sherds appear to have one or two shallow incised or engraved lines, but their surfaces are too eroded to be sure (Figure 16e).

The 10 faunal elements from Feature 1 consist of 9 fragments of degraded cortical bone and 1 small fragment of thinner flat bone. Some exhibit light thermal discoloration, but indications of burning are unclear on most pieces. Most were subjected to excavation and postexcavation breaks, and the largest is only 1.5 cm in length. They have a collective weight of 2.7 g.

The three sherds collected during trench excavation or subsequent trench cleaning were all

Figure 16. Ceramic sherds from 41TT906. (a) Punctated rim; (b) body sherd with appliqué strip with fingernail punctations; (c) brushed body sherd; (d) engraved body sherd; (e) eroded body sherd with possible incised or engraved lines.

within 30 cm of the modern surface, as were the four sherds and three pieces of debitage in Test Units 2 and 3; a single burned rock was found deeper (88–98 cm) in Test Unit 2 (see Table 4). Artifacts were found at greater depths in Test Unit 1; six flakes were collected between 17 and 57 cm, and four flakes were found between 67 and 87 cm. The Yarbrough dart point fragment was recovered at 52 cm, and the silicified wood hammerstone from Trench 2 that was associated with Feature 1 was found at about 40 cm. Four small fragments of burned rock were observed between 57 and 77 cm in Test Unit 1.

The vertical dispersal of artifacts in Test Unit 1 may be due, at least in part, to the downward movement of artifacts in the sediment column through bioturbation and pedogenic processes. Both forms of disturbance were observed during the excavation of that unit. No artifacts were recovered between 87 and 127 cm in Test Unit 1.

Assessment and Recommendations

Test excavations in two small parts of 41T906 revealed a disturbed prehistoric burned rock feature and a sparse distribution of prehistoric artifacts (4.8 artifacts/m^2). Artifact recovery in the east site lobe was limited to 3 prehistoric ceramic sherds, 1 dart point fragment, 1 flake, and 1 hammerstone. The west lobe yielded 13 sherds, a Dalton dart point, a Yarbrough dart point, a unifacial tool, 18 pieces of debitage, 4 ground/battered stone tools, 10 small fragments of faunal bone, and more than 16.4 kg of burned rocks. All of the sherds from the manual excavations and 40 percent of the lithic artifacts were recovered within 30 cm of the modern surface. Almost all of the prehistoric cultural material located below 30 cm was in Trench 2 and Test Unit 1, including the burned rock feature and the Yarbrough point.

The ceramic sherds suggest that a light Late Caddo component is present, probably mostly outside the project area to the north. The recovery of a Perdiz arrow point during survey is consistent with this chronological assessment. The Yarbrough point fragment, and probably the burned rock feature, are indicative of a Late Archaic component, which also is probably more concentrated outside the project area to the north. The Dalton point and perhaps the untyped dart point fragment could relate to much earlier occupations, or they may be artifacts recycled by the Late Archaic or Caddo occupants.

No component is represented by sufficient archeological remains within the FM 1000 project area to permit interpretation. Further, while some of the Archaic artifacts occur deeper in the surface sands than at least some of the Late Caddo artifacts, there is no evidence that the materials from these different occupations could be segregated from one another consistently and with confidence. There is no stratigraphy to facilitate isolation of components, and there is evidence in the form of vertic pedogenic features and ongoing bioturbation to suggest that the vertical distribution of artifacts is a function of disturbance rather than depositional processes. Another factor contributing to the deposits having low integrity is clearing and burning of trees in the late 1960s.

The investigated part of 41TT906 does not contain important information because of the scarceness of both features and artifacts, lack of datable materials, low integrity, and inability to isolate components with any confidence. Hence, it is not eligible for listing in the National Register of Historic Places under Criterion D (36 CFR 60.4; 36 CFR 800.4, 5) or designation as a State Archeological Landmark (13 TAC 26.2, 8).

SURVEY AREA 1

Description

Survey Area 1 encompasses a 3-acre segment of the proposed FM 1000 final alignment in open pasture on the Hart Creek floodplain west-northwest of 41TT906, extending approximately 280 m long by 52 m wide (horizontal Area of Potential Effects = 3 acres; all investigated) (see Figure 1); the area was privately owned at the time of survey. Current design plans call for a bridge to span the low-lying floodplain between embankments located west of Hart Creek and east of the Hart Creek relief channel. Thus impacts will be shallow (1 m or less), except where bridge piers will extend 7.6–12.2 m below the surface. Previous PBS&J survey efforts on the floodplain included excavation of numerous shovel tests in the second and third alternate FM 1000 alignments. Many of the shovel tests excavated west of the main stream and east of the secondary channel were within the proposed final alignment, but most of the tests and two backhoe trenches between the channels were north of the final alignment and Survey Area 1 (Figure 17). Seven of the previously excavated shovel tests were inside of the north edge of the survey tract, and an eighth was at the west end; none of these was positive for archeological materials. However, a potential for archeological materials in the survey area was indicated by previous isolated surface and subsurface finds in the floodplain north and south of the proposed final alignment and by the presence of several archeological sites east of the Hart Creek relief channel. Consequently, TxDOT-ENV requested that additional shovel testing be conducted.

Methods of Investigation and Results

A Trimble GPS receiver containing the proposed FM 1000 final alignment and the limits of Survey Area 1 was used to position and orient the field crew and to record the locations of excavated shovel tests. Ten shovel tests were placed along two transects through the area (see Figure 17). The transects followed the longitudinal axis and southern edge of the 3-acre parcel. Areas of higher topography were targeted for shovel test excavation. The tests were spaced such that 2 on each transect were between Hart Creek and a small drainage that trends across the central portion of the survey area, and 3 were in the wider area between the minor drainage and the Hart Creek relief channel. No tests were placed along the west bank of Hart Creek because PBS&J previously excavated 3 tests in that area.

Shovel tests were excavated in 20-cm levels, and all removed sediment was screened through 1/4-inch-mesh hardware cloth or carefully sorted through with a trowel when too difficult to screen efficiently. The hardness of the

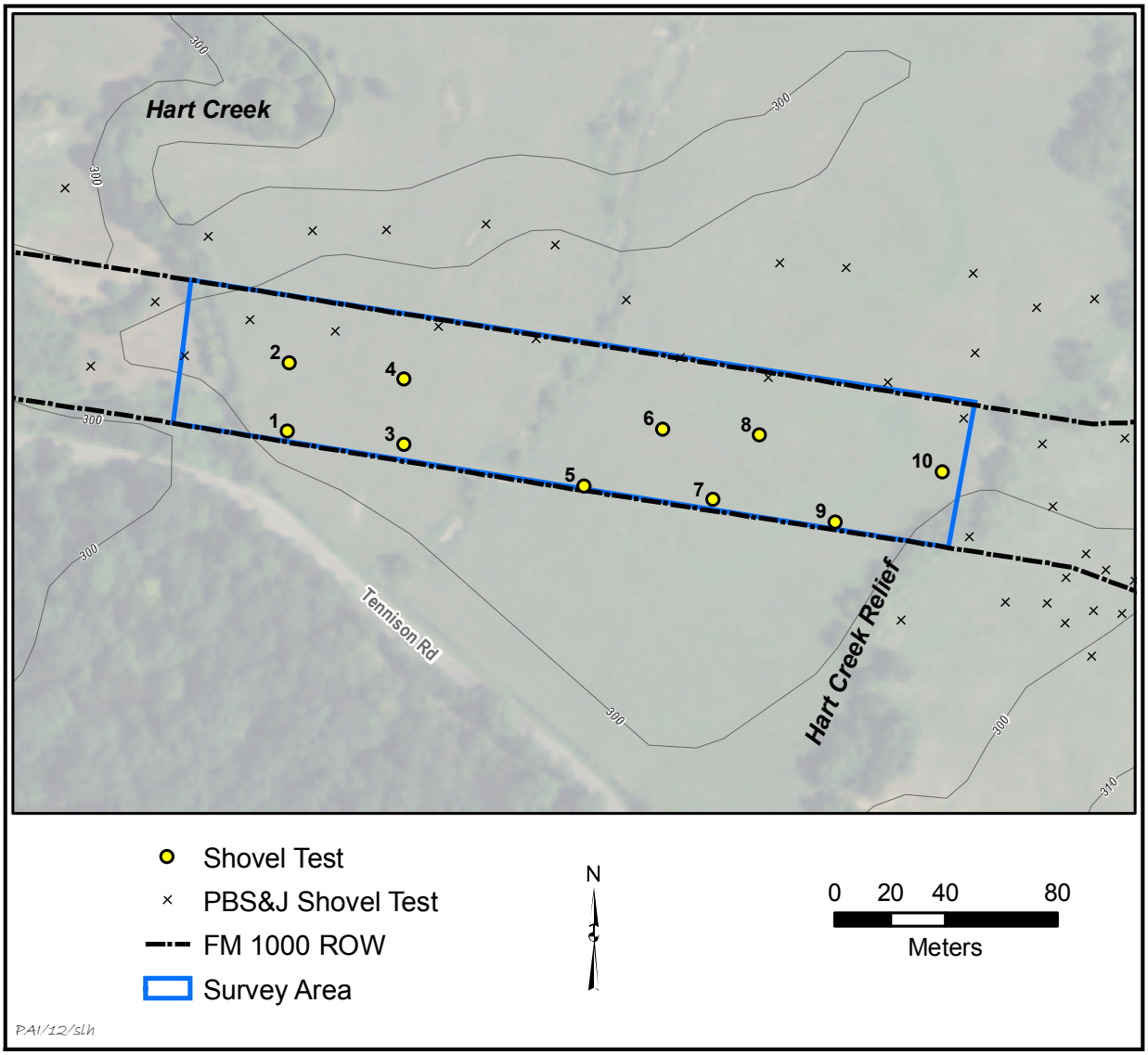

Figure 17. Map of Survey Area 1.

dry floodplain sediments hampered shovel test excavation. The tests varied from 50 to 70 cm deep, averaging 60 cm. The shovel test density is 3.3 per acre, which exceeds the Texas Historical Commission's standards for archeological survey for tracts of this size. Including the eight PBS&J shovel tests, the density is 6.0 per acre.

Floodplain sediments encountered in the shovel tests consisted of upper layers of strongly granular silty clay, silty clay loam, sandy silt, and silty sand that were typically less than 10 cm thick. These sediments were generally underlain by moderately to very well-consolidated silty clays and clays with strongly blocky structure. Underlying zones of silt or silt loam were encountered in three tests. These sediments contained minor percentages of fine-grained sand and clay and varying densities of ferromanganese staining starting roughly 50 cm below the surface. Several tests contained layers of dry compact sandy silt or clayey silt below the thin uppermost zones; clay loads in these secondary zones increased with depth. Widely dispersed charcoal fragments were present in the top 30 cm of two tests, and unburned tree roots were encountered in another test. Gravels were noticeably absent in the tested floodplain sediments.

Recommendation

No archeological materials or deposits were identified in the shovel tests in Survey Area 1. The eight PBS&J shovel tests within this parcel were also negative. Based on these findings, construction of FM 1000 in this area will not affect any cultural resources that are eligible for National Register listing or State Archeological Landmark designation.

SURVEY AREA 2

Description

Survey Area 2 encompasses a 7-acre, T-shaped parcel of proposed new right of way in the uplands at the intersection of the proposed FM 1000 final alignment and existing FM 2348 (see Figure 1). The survey area primarily consisted of maintained pasture utilized for hay production and stock grazing and was privately owned at the time of survey (Figure 18). The T-shaped west end consists of approximately 205 m of the east edge of existing FM 2348 right of way and varies from 10 to 15 m in width. The west-east main part of the survey area is approximately 400 m long and ranges from a width of ca. 110 m at its west end to 50 m at its east end (horizontal Area of Potential Effects = 7 acres; all investigated). Proposed cut sections on the current design schematics indicate that road construction impacts will extend to a maximum depth of 1.5 m below the existing surface in this tract. Thin fill sections are called for at the east and west ends of the parcel. Prehistoric sites were considered unlikely here because of the upland setting; shallowly buried historic sites were judged more likely.

Methods of Investigation and Results

A Trimble GPS receiver containing the proposed FM 1000 final alignment and the limits of Survey Area 2 was used to position and orient the field crew and to record the locations of shovel tests. Twenty-one shovel tests were excavated (see Figure 18). The west-east length of the tract was investigated by the excavation of 12 tests on two transects of 6 tests each. The two survey transects were spaced approximately 20 m apart. Four additional tests were in the arms of the T and along the north edge of the survey area's west half. Five additional tests were excavated within the fenced yard of a ca. 1920s house in the central portion. Shovel tests were excavated in 20-cm levels, and all removed sediment was screened through 1/4-inch-mesh hardware cloth or carefully sorted through with a trowel when too difficult to screen efficiently. Shovel tests were 10–30 cm deep, averaging 22 cm, reflecting the shallow surface sediments in this upland setting. The shovel test density for the 7-acre tract is 3.0 per acre, which exceeds the Texas Historical Commission's standards for archeological survey for tracts of this size.

Sediments consistent with Freestone series soils were identified in four tests on the west side of the surveyed tract (Shovel Tests 11, 12, 25, and possibly 13). The remaining tests (save for Shovel Tests 15 and 28) exposed sediment profiles more characteristic of Woodtell series soils. Sampled surface sediments were composed of thin layers of loosely to moderately consolidated, weakly to strongly granular loams and sandy loams with many roots. These sediments were typically less than 10 cm thick and exhibited varying degrees of disturbance derived from recent occupation and past and present land use. The underlying sediments typically consisted of hard, very well-consolidated loams and sandy loams with variable redoximorphic features and varying frequencies of hematitic gravels. The frequency of redoximorphic concentrations and hematitic gravels generally increased with depth. Zones of very well-consolidated clay loam, sandy clay, or clay were exposed from 6 to 20 cm below the surface, but were typically first encountered at the lower end of that depth range. Soil cracks were visible at the surface in maintained pasture across the survey tract.

Sediment profiles in most tests in the immediate vicinity of the 1920s house were similar to those encountered across the rest of Survey Area 2, but notable differences were encountered in two tests. A deposit of sand visible at the surface across much of the yard in front of the house (west and northwest of the structure) likely represents imported fill used to level the house pad, the front yard, or both. This layer of sediment was 20 cm thick in Shovel Test 28. An area of disturbed and possibly redeposited sediment southwest of the yard fence was investigated with Shovel Test 15. The strongly granular clay visible at the surface in this area

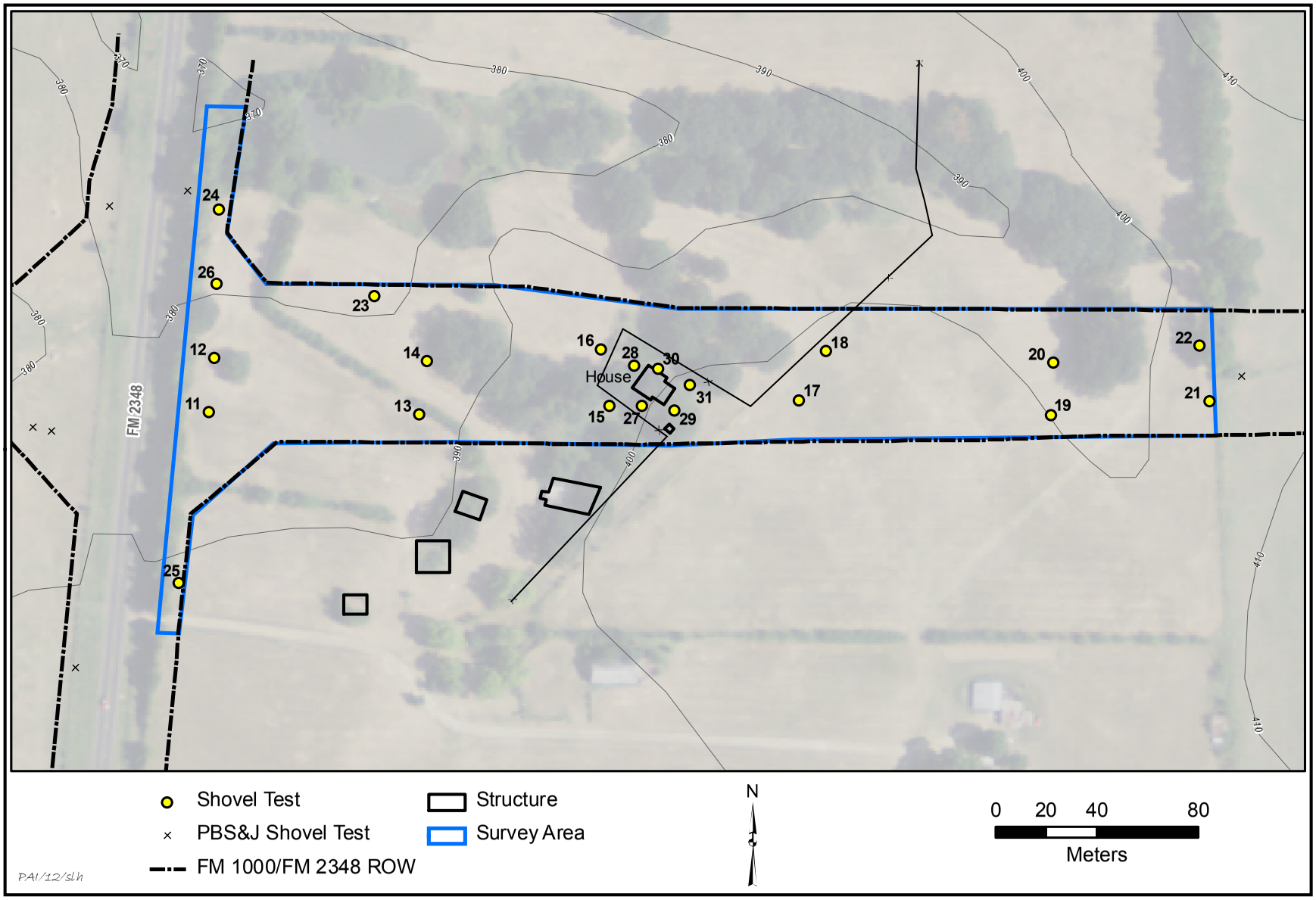

Figure 18. Map of Survey Area 2.

extended to a depth of 8 cm below the surface in that test. This material was mixed with peds of the underlying stratum and moderate-density charcoal fragments. The lower zone consisted of a very well-consolidated clay loam with ferrous staining and concretions and low-density hematitic gravels.

No prehistoric archeological materials were found, and the 1920s house provided the only hint that a historic site could be present. The house is within a fenced yard with approximate dimensions of 40 m northwest-southeast by 30 m northeast-southwest (see Figure 18). The fence consists of T-posts, a small number of wooden corner posts, goat wire, and a single top strand of barbed wire. The fenced area opens onto a raised gravel driveway that trends northeast to southwest behind the house. The drive is now rarely used and is covered with pasture grass. A modern aluminum shed is at the southeast corner of the fenced area.

The house is a bungalow that is representative of an architectural style that dominated early-twentieth-century residential construction in rural settings in this region. With contributions from the Arts and Crafts movement, rural bungalows typically have a cottage-like appearance with a low-pitched front-gable, side-gable, or pyramidal roof and wide overhanging eaves (Jakle et al. 1989:170–172; McAlester and McAlester 2000:452–453). The dominant style from the early twentieth century through World War II, the Craftsman design's popularity proliferated through widely distributed pattern books and magazines. In execution, the style was most frequently applied to the bungalow form. This was the most widely mass-produced house type in the United States. In Texas, various renditions of the form and myriad versions of stylized ornamentation were popular for about 40 years.

The bungalow has a side-gabled roof and a rectangular footprint with paired double-hung windows and overhanging eaves. The upper sashes in most of the windows feature nine lights. The eyebrow hood porch entrance and multilight panel door with a dentilated cornice are also indicative of the bungalow form with Craftsman influence (Figure 19a). The structure's long axis is oriented northeast-southwest, with the front entry facing northwest. Concrete steps likely associated with the back door were removed and left north of a fenced yard to make way for a large covered porch off the back of the house (Figure 19b). The porch and house roofs are covered with asphalt shingles, and the bungalow's original siding was replaced with vinyl siding (the same covers the gable end of the porch). The modern siding, asphalt shingles, storm windows and doors, and large back porch are recent additions.

The bungalow and surrounding yard were treated as a historic site at the time of the survey, and several structures south of Survey Area 2 outside the proposed FM 1000 right of way were photographed and visually inspected due to their potential association with the house. However, sand visible at the surface across much of the yard in front of the bungalow suggested that fill had been imported fairly recently to level the house pad, front yard, or both, and subsequent archival research and testimony provided by family members of the property owners verified that the house is not original to this location. Aerial photographs from 1930, 1949, and 1963 provide a general timeline for the appearance of the various extant structures and structure footprints in the vicinity of Survey Area 2 (Tobin International, Ltd. 1930; U.S. Army Map Service 1949; U.S. Department of Agriculture Agricultural Stabilization and Conservation Service 1963). However, none of these images shows a structure where the bungalow is now located, indicating that it was moved to that location after 1963. Deed records indicate that Nellie D. Clark purchased the property in 1975. Clark family members noted that the bungalow was moved to its present location from Mount Pleasant, but they did not know when this occurred, which suggests that the house was moved there between 1963 and 1975. According to family members, the house was stripped down to its structural frame and renovated in 1995. The lack of historic artifacts in the seven shovel tests near the house provides additional evidence that a historic archeological component is not present. The 21 shovel tests in Survey Area 2 yielded only an aluminum pull-tab (Shovel Test 14) and asphalt fragments (Shovel Test 25).

Recommendation

No archeological materials or deposits were identified in Survey Area 2, and the extant house there is not eligible for listing in the National Register because it does not possess integrity

a

b

Figure 19. Photographs of the ca. 1920s bungalow in the central portion of Survey Area 2. (a) View to the southeast of the front; (b) view to the northwest of the back.

of place or materials. Based on these findings, construction of FM 1000 in this area will not affect any cultural resources that are eligible for National Register listing or State Archeological Landmark designation.

SURVEY AREA 3

Description

Survey Area 3 consists of a ca. 3-acre segment of proposed new right of way on the northeast side of existing FM 1735 right of way at the east terminus of the project corridor (see Figure 1). Survey was required in this area because shovel tests were not excavated in that segment of new right of way during the previous PBS&J survey. This narrow section abuts both the northwest and southeast sides of 41TT896 and thus was considered to have some potential for shallowly buried prehistoric and historic sites (Figure 20). The area is 630 m long (excluding the 110-m segment considered part of 41TT896) and has an average width of 18 m (horizontal Area of Potential Effects = 2.8 acres; all investigated). Although project schematics do not depict this portion of the project area, design details for the east terminus of FM 1000 and for proposed modifications of FM 1735 suggest that construction impacts will be 1 m or less deep. Survey Area 3 included portions of two privately owned tracts at the time of the field investigation, with two residential properties at its northwest end and part of another at the east corner of 41TT896. Most is maintained pasture used for cattle grazing.

Methods of Investigation and Results

A Trimble GPS receiver containing the proposed FM 1000 final alignment and the limits of Survey Area 3 was used to identify the boundaries of the survey area and to record the locations of shovel tests. Initially, 11 shovel tests were placed in that portion of the survey area not overlapped by 41TT896 (6 northwest and 5 southeast of 41TT896), being careful to avoid a buried water line set approximately 2–3 m outside the existing right-of-way fence. The recovery of historic-age artifacts in Shovel Test 4 prompted the excavation of 8 additional tests to define the limits of historic site 41TT918 identified on a hill about 120 m northwest of 41TT896. All tests were excavated in 20-cm levels, and all removed sediment was screened through 1/4-inch-mesh hardware cloth or carefully sorted through with a trowel when too difficult to screen efficiently. The shovel test density for the 2.8 acres outside 41TT896 is 6.8 per acre, well exceeding the Texas Historical Commission's standards for archeological survey on tracts of this size.

Shovel tests varied from 30 to 100 cm deep, averaging 56 cm. Sediments encountered in all but 2 of the 14 tests northwest of 41TT896 included upper layers of sand, silty sand, and sandy loam that ranged from 15 to 65 cm thick. The single horizon of sand exposed to a depth of 50 cm in Shovel Test 15 contained tabular ironstone rocks throughout the excavated profile. The sediment column exposed to a depth of 100 cm in Shovel Test 19 was a single unit of sand mixed with occasional fine gravels. Secondary and tertiary zones of sand and silty sand were noted in 4 tests. Basal layers were typically composed of silty clay and clay. Abundant gravels were noted in basal sediments in Shovel Tests 14, 16, and 18 in an elevated portion of the survey area The sediments in Shovel Tests 12, 14, 16, and 18 are consistent with the characteristics of the unit of Kirvin gravelly fine sandy loam that is mapped across the most elevated portion of Survey Area 3 (Roberts 1990:38, 39, Map Sheet 38; U.S. Department of Agriculture, Natural Resources Conservation Service 2012b). The sediment profiles in other tests on this elevated area (Shovel Tests 4, 13, 15, and 17) and in Shovel Test 19 to the southeast are characterized by much deeper surface sands.

The five tests southeast of 41TT896 were shallower than those northwest of the site. Sediments typically consisted of upper layers of sand and silty sand that varied from 28 to 40 cm thick. Mottling was infrequent, and in some instances, clay increased with depth. Basal sediments consisted of silty clay and clay. The sediment profile in the deepest of the tests in this area (Shovel Test 7) consisted of upper and lower layers of silty sand. Saturated sediments prevented exposure of basal clay in this test.

Survey of Area 3 identified one historic site and no prehistoric materials. The historic site, 41TT918, is approximately 120 m northwest of 41TT896 on the side slope of a small oval ridge in an upland setting dissected by intermittent

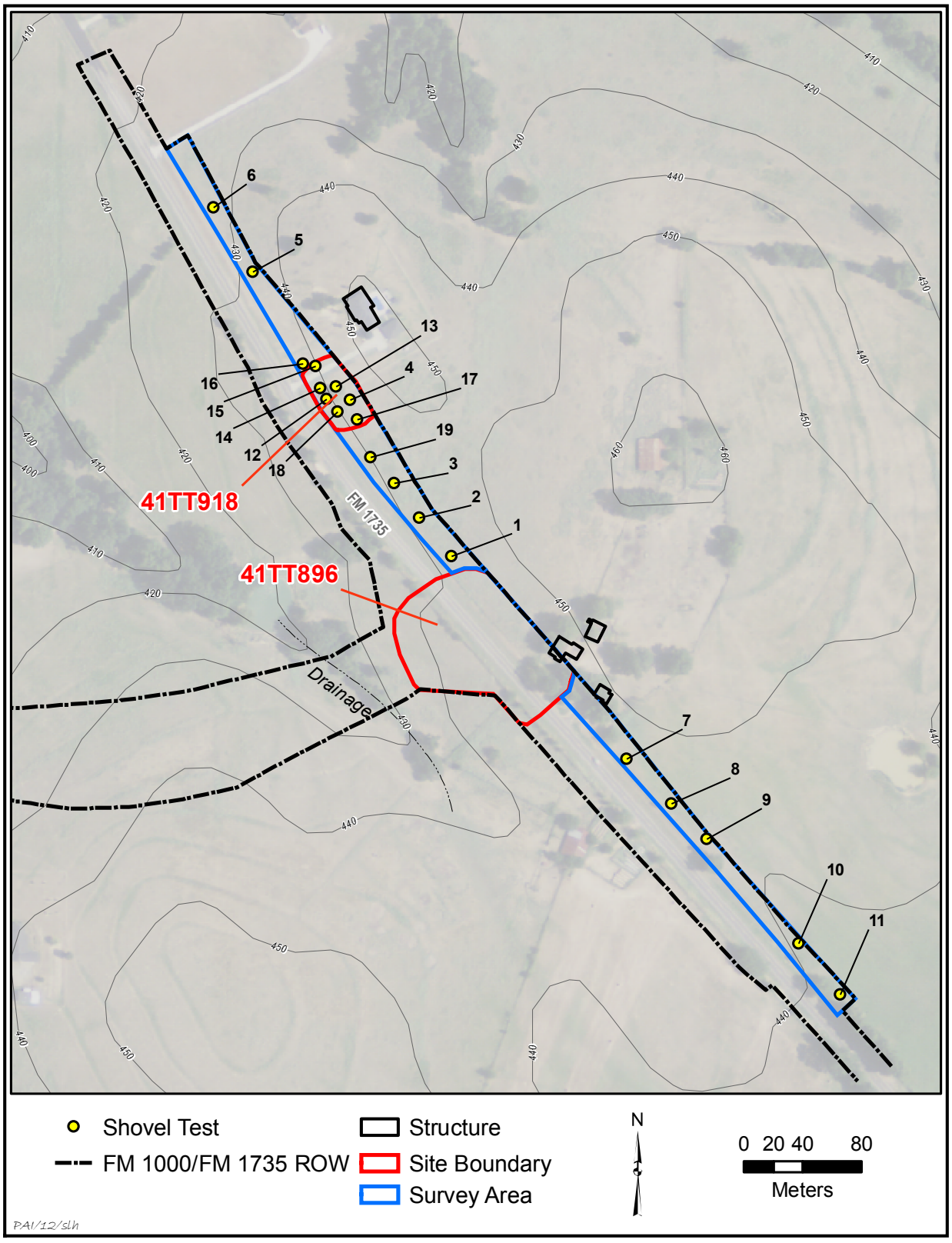

Figure 20. Map of Survey Area 3.

drainages (see Figure 20). A modern residence now occupies the top of that ridge northeast of the site. The site is centered on a topographic high that falls gently into a low-lying area on the southeast and more rapidly toward a tributary northwest of the site, with the overall slope of the landform being to the southwest. Site surface elevations range from about 435 to 445 ft. The recorded site area has approximate maximum dimensions of 55 m northwest-southeast by 30 m northeast-southwest, with the site probably extending northeast outside the project area. A property fence trends across the central portion of the site, and a tree is centered in the site area immediately northwest of the fence. The southeast half of 41TT918 is in maintained cattle pasture covered with short grasses and forbs. Daffodils are common across this part of the site. The northwest half is in the yard of the house to the north, with a concrete driveway cutting across it (Figure 21).

Site 41TT918 was indicated by the presence of historic artifacts on the surface and the recovery of historic artifacts in Shovel Tests 4, 12, 13, 15, and 17. The other three tests in the immediate area lacked artifacts. Although ground surface visibility typically was 5 percent or less, surveyors did observe pieces of glass, historic ceramic sherds, wire nails, and fragments of wire and indeterminate metal on the surface. Partially burned lumber, fence posts, saw-cut tree branches, and segments of barbed wire were in a 5–7-m-diameter area in the central part of the site's southeast half. No footings or foundations were observed to indicate former structure locations, and the burned materials, which were just visible above the vegetation, may be recent additions unrelated to the other historic materials at this location.

The artifact sample recovered in five positive shovel tests consists of 17 pieces of glass, 3 historic ceramic sherds, 12 metal artifacts, 3 conjoinable fragments of possible brick or plaster, a small thin piece of slate, a piece of modern plastic, and a small quartzite flake (Table 5). The morphology of the latter suggests that it was produced during the excavation of Shovel Test 13, and it is not considered to be of prehistoric origin. The glass assemblage is mostly clear glass (n = 14) but also includes 2 pieces of clear glass with a greenish tint and 1 piece of solarized amethyst glass. The latter is a basal vase or tableware fragment. Some of the other glass fragments are identifiable as vessel (n = 6) and bottle (n = 3) fragments. The remaining pieces are identifiable only as a curved piece of automobile glass and pieces of curved (n = 3) and flat (n = 3) glass. One of the bottle fragments is broadly attributable to the 1920s or later, and the piece of solarized glass is datable to the late nineteenth or early twentieth centuries. The ceramic artifacts include a highly vitrified piece of semiporcelain/ironstone and a basal fragment from a shallow ironstone dish. Both are white with clear glaze. The third ceramic artifact is a poorly vitrified earthenware pipe fragment with a glazed interior and exterior. Metal artifacts include a cut nail, 5 wire nails, a large wire nail fragment, a large bolt, and a segment of barbed wire. Single indeterminate fragments of wire, iron, and flat metal were also recovered. Although 1 piece of glass was recovered at 40–60 cm in Shovel Test 4, the bulk of this assemblage was recovered within 20 cm of the modern surface (29 of 38 artifacts). Eight other items were found at 20–40 cm. Given natural disturbance (rodent activity) and the amount of human-derived disturbance that can be inferred from surface observations and review of historic aerial photographs, it is not surprising that some of the assemblage was recovered below 20 cm.

A large structure and one small structure are visible in the site location on a 1935 aerial photograph (Figure 22a; Tobin International, Ltd. 1935). These structures may not reflect a domestic locus, since no driveway linked them to the roadway just to the southwest, and other attributes common to residential occupancy (such as trees or other landscaping) appear not to have been present. On the other hand, the presence of some domestic artifacts implies that a house may have stood here. Either way, these structures appear to have been an outlying part of a much larger farm complex that was centered 220 m to the southeast along FM 1735, where an occupied residence, barn, and several other outbuildings still stand at the east corner of 41TT896. A two-track road is clearly visible between that set of buildings and the structures that once stood at 41TT918 (see Figure 22a). Based on these relationships, the presence of agricultural fields just north and west of 41TT918, and the size of the larger structure there (approximately 24x20 ft), 41TT918 may have contained a pole barn or shed with smaller ancillary structure that supported

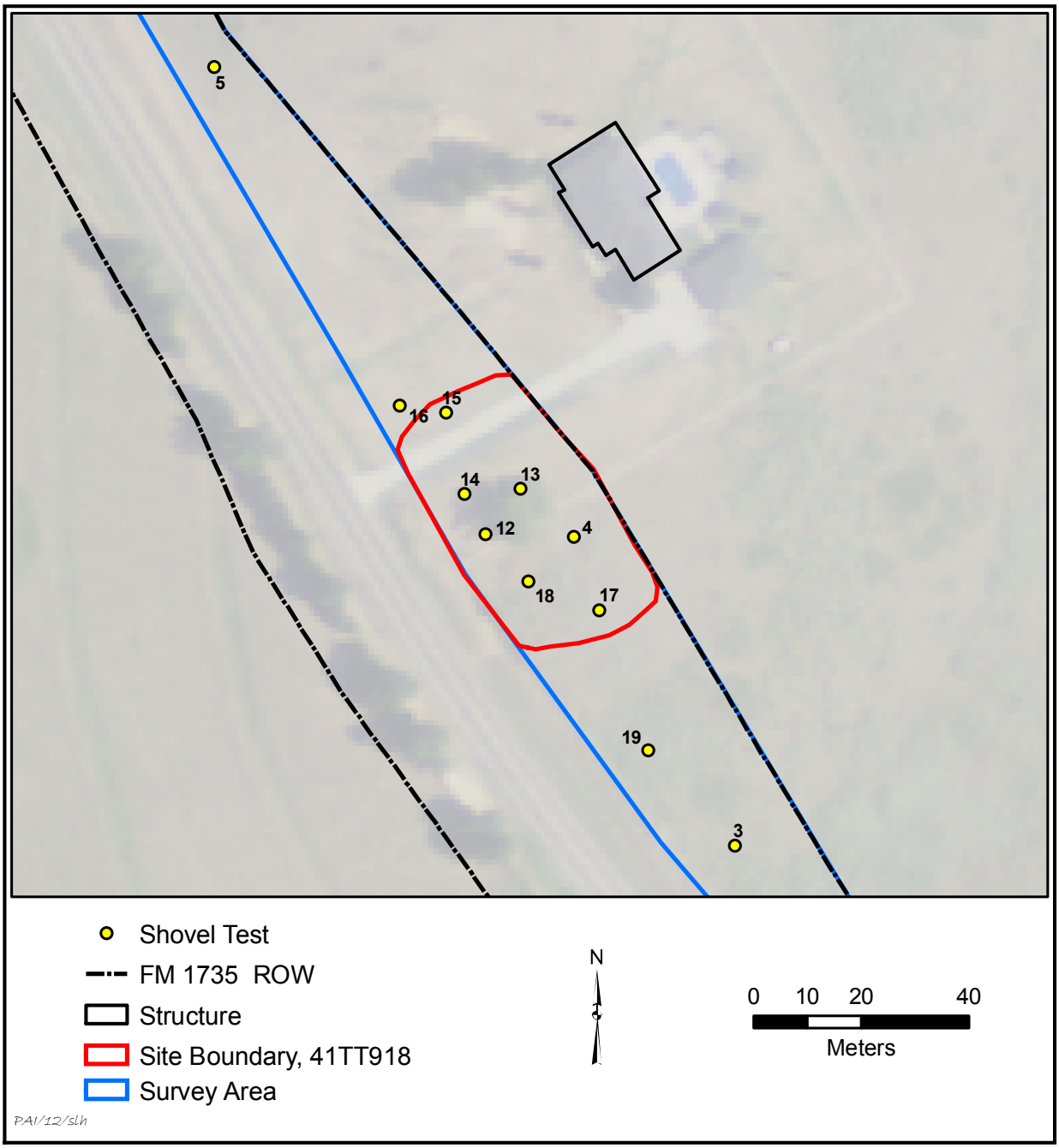

Figure 21. Map of 41TT918 and environs.

nearby farming activities or perhaps a tenant or worker's house.

Neither set of structures appears to be present on the 1909 soils map for Titus County (U.S. Department of Agriculture, Field Operations Bureau of Soils 1909), suggesting that the farm complex was established in the 1910s–early 1930s. In 1963, the main farm complex was still in operation, but the structures at 41TT918 were gone (U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service 1963). Instead, two linear features 40–45 m long, spaced roughly 25 m apart, and oriented perpendicular to adjacent FM 1735 are visible on the 1963 aerial, with one passing through the northern part of 41TT918 and the other just

Table 5. Artifacts recovered from shovel tests at 41TT918

Provenience	Debitage	Glass	Ceramic	Metal	Brick	Other	Total
Shovel Test 4							
Level 1	0	0	0	4	3	0	7
Level 2	0	3	0	0	0	1	4
Level 3	0	1	0	0	0	0	1
Level 4	0	0	0	0	0	0	0
Shovel Test 12							
Level 1	0	1	1	0	0	0	2
Level 2	0	0	0	1	0	0	1
Level 3	0	0	0	0	0	0	0
Shovel Test 13							
Level 1	1	5	1	1	0	0	8
Level 2	0	2	0	0	0	1	3
Shovel Test 15							
Level 1	0	0	1	1	0	0	2
Level 2	0	0	0	0	0	0	0
Shovel Test 17							
Level 1	0	5	0	5	0	0	10
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Total	1	17	3	12	3	2	38

north of the site (Figure 22b). Ghosts of both features are visible on a 2010 aerial photograph and in recent photographs of the site area (U.S. Department of Agriculture, National Agriculture Imagery Program 2010). Shadow orientation on the 1963 aerial and the fact that traces of these features are still visible today suggest that they are derived from cuts into the ground surface. Although these features cannot be interpreted based solely on the 1963 aerial, their location and orientation with respect to FM 1735 suggest that they might have been silage pits that have since been filled in. Whatever they were, clearing associated with their excavation apparently removed most traces of the structures that stood there before.

Recommendations

Although two structures were present at 41TT918 by 1935, these structures were removed by 1963, and the site now consists of a surface and near-surface scatter of twentieth-century cultural debris primarily composed of building and fencing materials and domestic/utilitarian artifacts. It is unclear if the structures represent farm outbuildings or a tenant or worker's house, but it is certain they were an outlying part of a large farm complex centered over 200 m away to the southeast. Because the main part of this complex remains unrecorded outside the project area and is not being assessed here, archival research to document its associations was not done. Because 41TT918 is a minor component of a much larger complex, dates entirely to the twentieth century, and retains no integrity, it lacks the capacity to contribute important information and is ineligible for listing in the National Register (36 CFR 60.4; 36 CFR 800.4, 5) and designation as a State Archeological Landmark (13 TAC 26.2, 8).

No archeological remains other than 41TT918 were found in Survey Area 3. The southwest edge of the large farm complex that

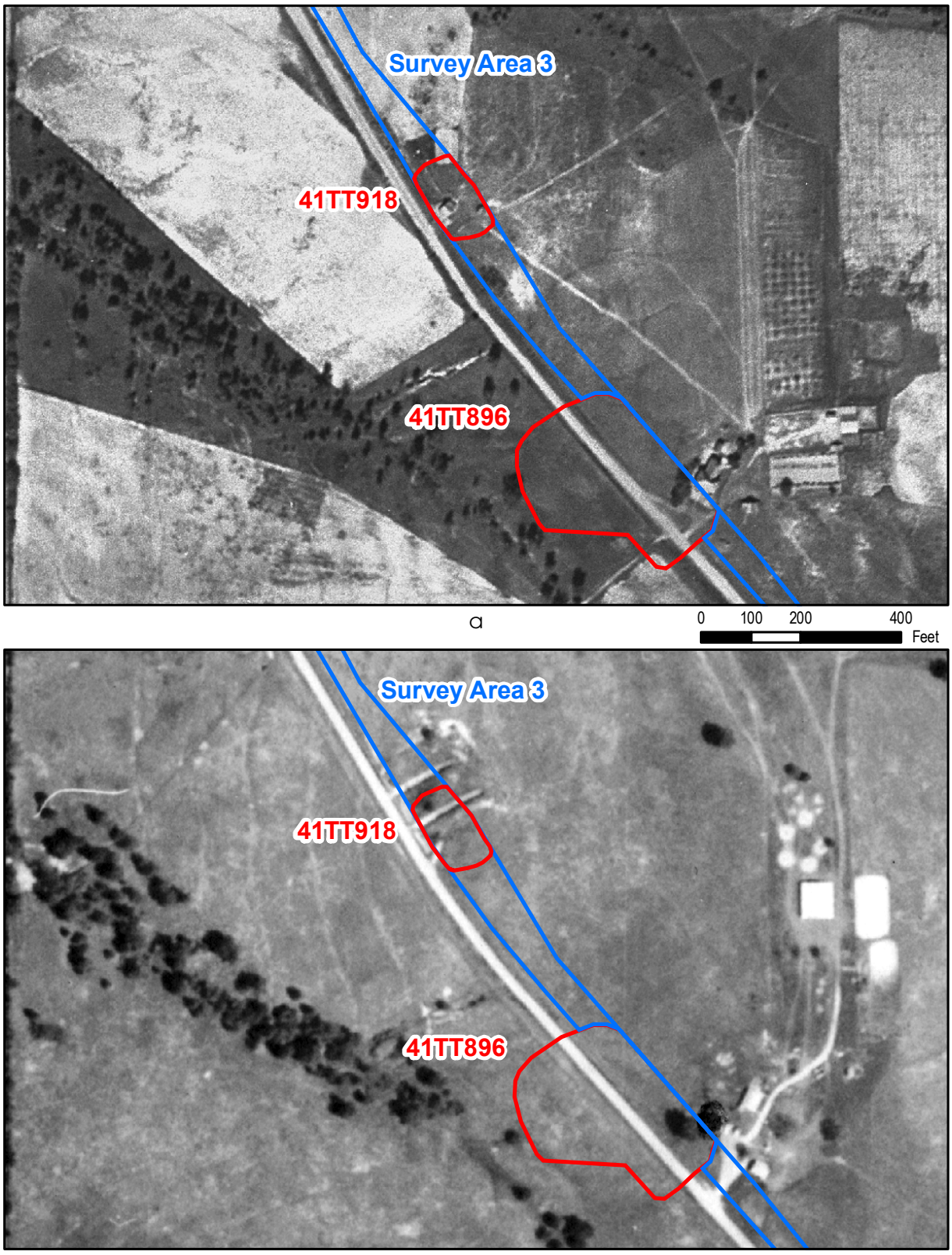

Figure 22. Historic aerial photographs showing structures and other features in and around 41TT918. (a) 1935 Tobin International, Ltd.; (b) 1963 U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service.

is adjacent to it is recorded as part of 41TT896, and assessment of that component is discussed above. Based on these findings, construction of FM 1000 in this area will not affect any cultural resources that are eligible for National Register listing or State Archeological Landmark designation.

SUMMARY AND CONCLUSIONS

In July–August 2011 and January–February 2012, personnel with Prewitt and Associates, Inc., performed test excavations at archeological sites 41TT896 and 41TT906 and archeological survey of two ca. 3-acre parcels and a ca. 7-acre parcel in Titus County, Texas. Additional work in the form of mechanical scraping was done at 41TT906 in July 2012. All of this work was done for Titus County under a contract with PTP Transportation, LLC, and Texas Antiquities Permit No. 5998 in response to the planned realignment of the FM 1000 corridor. Sites 41TT896 and 41TT906 had been identified during a previous survey for the project (O'Kelly et al. 2009) but needed additional investigation to determine if they are eligible for listing in the National Register of Historic Places or designation as State Archeological Landmarks. The three parcels surveyed needed investigation because parts or all of them were not included in the previous intensive archeological survey. Testing involved backhoe trenching, trackhoe scraping, and manual excavation of test units and shovel tests, and survey involved pedestrian transects and shovel testing. All artifacts and records generated by this project are curated at the Texas Archeological Research Laboratory at the University of Texas at Austin.

Test excavations at 41TT896 revealed low-density scatters of prehistoric (n = 52) and historic (n = 59) artifacts in thin disturbed surface sediments. The prehistoric assemblage suggests short-term, nonintensive use for a limited range of activities sometime during the Late Archaic period. The one feature identified is of historic age and probably represents a surface disturbance or erosional cut that was partially backfilled with ironstone rocks and cobbles. The historic component relates to extended occupation of an adjacent farm complex outside the project area to the east, along with trash discard along FM 1735. Because the main part of this complex remains unrecorded outside the project area and is not being assessed here, archival research to document its associations was not done.

Given its insubstantial nature, association with farmstead activities centered outside the project area, low integrity, and twentieth-century age, the historic component of 41TT896 does not have the capacity to contribute important information. The prehistoric component also does not contain important information, based on the lack of features, sparseness of artifacts, lack of datable materials, low integrity, and thinness of the surface sediments. Given these characteristics, there is no potential for isolating prehistoric occupations that could be interpreted with any confidence. Hence, neither component is eligible for listing in the National Register of Historic Places under Criterion D (36 CFR 60.4; 36 CFR 800.4, 5) or designation as a State Archeological Landmark (13 TAC 26.2, 8).

Test excavations and mechanical scraping at 41T906 revealed a disturbed prehistoric burned rock feature and a sparse distribution of prehistoric artifacts (n = 44) representing occupations during the Late Caddo and Late Archaic periods; most of the site apparently lies outside the project area to the north. Two dart points recovered during scraping may indicate earlier occupations as well, or they may be recycled artifacts. No component is represented by sufficient archeological remains within the FM 1000 project area to permit interpretation. Further, there is no evidence that the materials from the different occupations could be segregated from one another consistently and with confidence, and various disturbance factors, including clearing and burning of trees in the late 1960s, have diminished the integrity of the deposits. The investigated part of 41TT906 does not contain important information because of the scarceness of both features and artifacts, lack of datable materials, low integrity, and inability to isolate components with any confidence. Hence, it is not eligible for listing in the National Register of Historic Places under Criterion D (36 CFR 60.4; 36 CFR 800.4, 5) or designation as a State Archeological Landmark (13 TAC 26.2, 8).

No archeological materials or deposits were identified in either Survey Areas 1 or 2, and the extant house in Survey Area 2 is not eligible for listing in the National Register because it does not possess integrity of place or materials, having been moved onto the property in

the 1960s–1970s and subsequently remodeled extensively. The single site identified in Survey Area 3, historic site 41TT918, is a surface and near-surface scatter of twentieth-century cultural debris representing outbuildings or a tenant or worker's house associated with a large farm complex centered over 200 m away to the southeast. Because the main part of this complex remains unrecorded outside the project area and is not being assessed here, archival research to document its associations was not done. Dating entirely to the twentieth century, retaining no integrity, and being a minor component of a much larger complex, 41TT918 lacks the capacity to contribute important information and is ineligible for listing in the National Register (36 CFR 60.4; 36 CFR 800.4, 5) and designation as a State Archeological Landmark (13 TAC 26.2, 8).

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